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ABSTRACT

This report presents the results of a study made to discover what changes are made in students' occupational plans and attitudes after attending 4 years of agricultural school. The Missouri College of Agriculture was the site of the study, and the 1964 freshman class was the focus. Questionnaires regarding occupational choice and socioeconomic background were distributed to the students upon entering college, and comparisons are made in the report with the same students 4 years later. Of the 255 students polled in 1964, only 145 were left at the college in 1968. A comparative study is made of those who stayed and those who left with regard to differential background experiences and inclinations. (HS)

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Occupational Views and Decisions of Missouri College of Agriculture Students: A Panel Study of 1964 Freshmen—1968 Seniors

Herbert F. Lionberger and Betty S. Heifner

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Occupational Views and Decisions of Missouri College of Agriculture Students: A Panel Study of 1964 Freshmen—1968 Seniors

Herbert F. Lionberger and Betty S. Heifner

INTRODUCTION

What changes are made in students' occupational plans and attitudes during college in a midwestern agricultural college? These are the central concerns of this study. Answers are sought in the backgrounds of students which figured in choice of the college and of an occupation in the first place and in the college experience itself.

The study is unique in that it began with students when they first entered college and followed them through four years of college life, thus permitting a more accurate assessment of the changes made and of the conditions and socializing influences associated therewith than would be possible from samples at two points in time. Socialization is used to refer to the general process by which a person learns new roles in society or more generally the process by which one learns what he needs to know in order to get along as a functioning member of society. Aside from the quite distinctly sociological considerations more completely set forth elsewhere by the junior author (Heifner, 1969), there were the more practical considerations of how the educational experience: (1) operated to broaden or restrict the thinking and perspective of the students, and what these changes were; (2) influenced the strong occupational orientation and life values of the students.

In regard to the college experience itself questions raised were:

(1) Did it provide a sustaining experience which motivated students to finish their college education?
(2) What were the differential background experiences and inclinations of those who stayed and those who left?
(3) Was life in a big university one in which the student was cut off from association with advisers and faculty, as well as one in which participation in organized student activities would enhance his education?

THE STUDENT SAMPLE, 1964 and 1968

Number and Distribution

The students involved in the study were 255 freshmen who entered the College of Agriculture in 1964, a number which had declined to 145 by the fall of 1967. Of this group, four graduated in January, 1968. In the meantime 110 had left the university without a college degree. Of the 255 students, 79.6 percent were from the country and 20.4 from what we refer to in this study as town-city.

The combination of the small town resident (under 2,500) with the conventional census classification of urban was used because prior exploratory work with the high school students indicated that the small town students were more like city students and those living in the open country more like those who lived on a farm even though their families were not necessarily engaged in farming (Gregory and Lionberger, 1968). Only boys were included in the study because the College of Agriculture enrollment is predominantly male.

The College of Agriculture, reflecting the complexity of the agricultural enterprise in the United States today, is actually comprised of a multitude of specialties including the basic and applied sciences, food processing and nutrition, marketing, management and agri-business, indeed approaching the breadth of specialization and concern coincident with the complex larger society itself. Thus, it is understandable that a considerable number of city students were also attracted to the agricultural college. Just as in the rural-urban distinction, students came from a wide diversity of occupational backgrounds but in the aggregate at an estimated status level a little above those of university students entering the other colleges of the university in 1964 as indicated by the North-Hatt method of measuring the prestige level of an occupation (North and Hatt, 1947). This provides an assessment of the prestige level of occupations as seen by the U. S. population generally.

Comparative Characteristics of Those Who Stayed and Those Who Left

Comparisons were made between the 145 students who were still enrolled in one of the Columbia campus colleges during the fall of 1967 and the 110 students who left without a college degree. Drop-outs not being a central concern of this study, no attempt was made to determine what happened to them after they left the University or even when they actually dropped out of school. Yet some information was available from the initial participation in the study in 1964. It is from this knowledge base that comparisons were made and inferences drawn. Similarities are briefly noted and differences described in light of what findings from previous studies of a similar nature might lead us to expect from the population of students studied.

Prior residence. First on the basis of research findings of the depressing effect of intent to farm or even farm residence on college attendance, and thus presumably also on persistence in college, (Burchinal, 1962; Cowhig, 1960; Haller, 1957; Lindstrom 1965) it might be expected that the farm boys would be less inclined to persist in college through the four years than the town-city students. Yet this was found not to be the case. Some 58 percent of the country boys remained in the university up to the fall of 1968 compared to 51.9 percent of the town-city (Fig. 1). Perhaps this should come as no surprise since agricultural colleges would be expected (despite their diversity of offerings) to be more attractive to country boys once enrolled than to the town-city; this despite the fact that many of the latter, as we shall see, were enrolled in the College of Agriculture as a means of achieving ends only peripheral to the agricultural world itself.

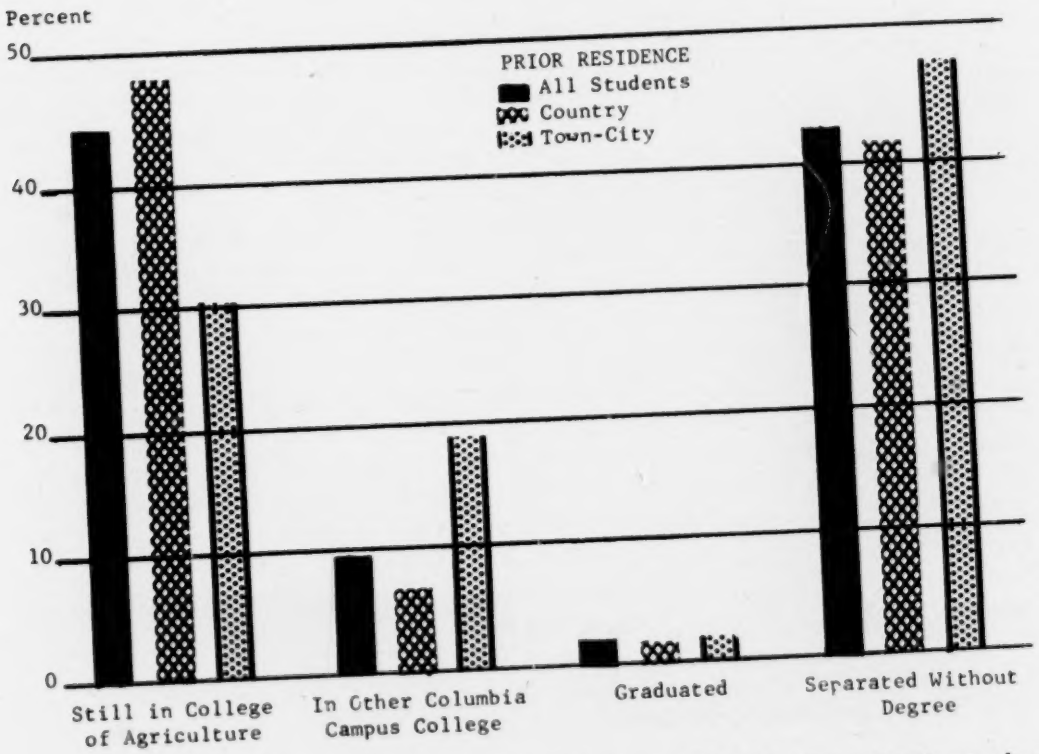

FIG . 1 - Present College status of 1964 College of Agriculture Freshmen by prior residence.

The Influence of Peers and Parents. The family operates in many ways to dispose the student toward decisions to enter college and to make this financially possible. Aside from the socio-economic status considerations and ability to support this expensive business of educating a son or daughter, parents may operate as agents for progressively enhancing conditions which predispose a child toward going to college while at the same time either cutting off or minimizing other alternatives to the point where a college prospect actually is in almost no position to choose at all. Thus, when it comes time to enter college he is so disposed to this type of thinking that alternatives to going to college are not even considered. Responses to questions about a decision may be typically glossed over by such an answer as "I knew I was going all the time." For others, choice may indeed be a requirement and thus there is presumably a degree of rationality in weighing alternatives, situational circumstances, and projected consequences. Subjective support, implied influence of the educational background of the parent, involvement in "stage setting" activities impelling the prospect in the direction of college, and the economic support accorded were considered to the extent that our data would permit.

Looking first at the subjective atmosphere of support as seen by the students themselves or more specifically the importance that they thought their

parents attached to a college education, drop-outs were essentially no better or no worse off than those who stayed. This was also true in perceived encouragement by parents to enter college. Well over 90 percent of both categories perceived this type of encouragement and 80 percent or more of the parents of both groups were perceived as regarding a college education as a most important course of action for youth after high school. Actually such small differences as did occur were in favor of those who were separated from college without a degree. This suggests the possibility that parents of drop-outs might have been a little more committed to a college education than their sons.

Quite in accord with studies of several researchers (e.g., Altus, 1966), the oldest child in the family appeared more often in the persistent group than in the drop-outs, percentages being 40.6, and 28.2, respectively. Prospects of the youngest child staying in were slightly but not significantly better than average. Perhaps who fares best in regard to sibling position varies considerably with family and other circumstances. However, it would appear that the oldest child having had more opportunity to develop a mature realism might in so doing also develop qualities that would be conducive to entry into college and successful adjustment to college life.

In accord with expectations from previous studies which quite consistently show a positive relationship between college attendance and socio-economic status (Lipset and Bendix, 1959; Burchinal, 1962), there was little difference in this regard between parents of students who stayed in school and those who left. In fact, fewer of the latter than the former (17.3 percent and 31.7 percent) had less than a high school education. The percentage of fathers with some college education was almost identical. However, in regard to the mothers' schooling the situation was somewhat reversed. The educational level of mothers of sons who stayed in college was slightly higher than that of the mothers of sons who left. Also the occupational prestige level of fathers as measured by the North-Hatt scale was at least as high for those who left as those who stayed. In both cases the great majority (two-thirds or more) saw their parents' income as farmers as being average or above in their respective residential localities. Of course, this represents only rough estimates of parental income or socio-economic status and indicates virtually nothing about willingness to pay or assistance in paying the college expenses of their sons. In the latter, parents were generally perceived as being highly supportive of college attendance for the respondents with nearly 90 percent of those who stayed and almost 85 percent of those who left indicating that they expected their parents to pay all of their college expenses. Thus, assuming that the support was forthcoming it could hardly be said that students who left were relatively more deprived of parental financial support for attending college than those who stayed.

A previous Missouri study has shown that overt involvement of parents in activities which predispose their children to college attendance is an important variable associated with decisions to enter college (Gregory and Lionberger, 1968). Thus, a parent may insist that his son take college preparatory courses, avoid occupationally oriented ones, develop good study habits, and make sufficiently good grades to enter and succeed in college.

Several measures of parental involvement were available, namely parental urging of students to take college preparatory courses in high school, parents' discussing with high school counselors the courses students should take, attending college night or visiting a college campus, discussing college plans with a counselor, writing a letter to a college, and discussing college plans with the students themselves. On all of these measures, without exception, it was found that a greater proportion of those who stayed in college reported such parental intervention compared to those who left.

Encouragement on a more positive note was observed for those who remained in college than for those who dropped out, when students were asked about parental urging to make good grades with rewards and or reprisals. Slightly more parents urged with rewards for the former group than for the latter. Urging with reprisals was more frequent for the drop-outs. Urging good grades, but without rewards or reprisals, was more often felt by the students who persisted in college. All of this is indicative of early active intercession of some parents to encourage if not to insure later college attendance.

One might suspect that students who failed to finish college may be more influenced by peers and parents than those who stayed and that the latter by comparison might elect to go to college by inner-directed conviction of the importance of a college education and the sacrifices necessary to obtain it. While approximately 75 percent of both groups reported encouragement from friends to go to college, slightly more of those who dropped out reported encouragement from brothers and sisters, a few more from friends at the university as being most influential in deciding to enroll and considerably more (20.0 percent compared to 9.7 percent) reported friends as the most important reason for first becoming interested in the University. These differences plus a slightly greater inclination to parental influence suggests the possibility of an "other" rather than "inner" directed reasoning for coming to college on the part of dropouts. However, in the absence of more definitive evidence than is available in this study, such an inference had best be regarded as an hypothesis in need of further testing.

Time of Decision. Students who come to college with a prior long-term commitment as opposed to a relatively late clear-cut decision may be expected to have first considered college attendance earlier in their educational careers. This indeed was one of the biggest differences between those who remained in college and those who left. About 29 percent of the former and 17.3 percent of the latter said they had considered college attendance as far back as they could remember; 66.2 percent and 50.9 percent, respectively, before the junior year in high school (See Fig. 2). In contrast, 20.0 percent of those who left did not seriously think about attending college until the last part of their senior year or even after high school graduation; this in comparison to 8.3 percent of those who remained in college. Again early internalization of the importance of college attendance is indicated in those who persisted in college.

Financial Support. Although lack of finances did not appear to be an important factor in dropping out of college, surely it must have been important in some cases. Almost 90 percent of both groups expected their parents to pay all

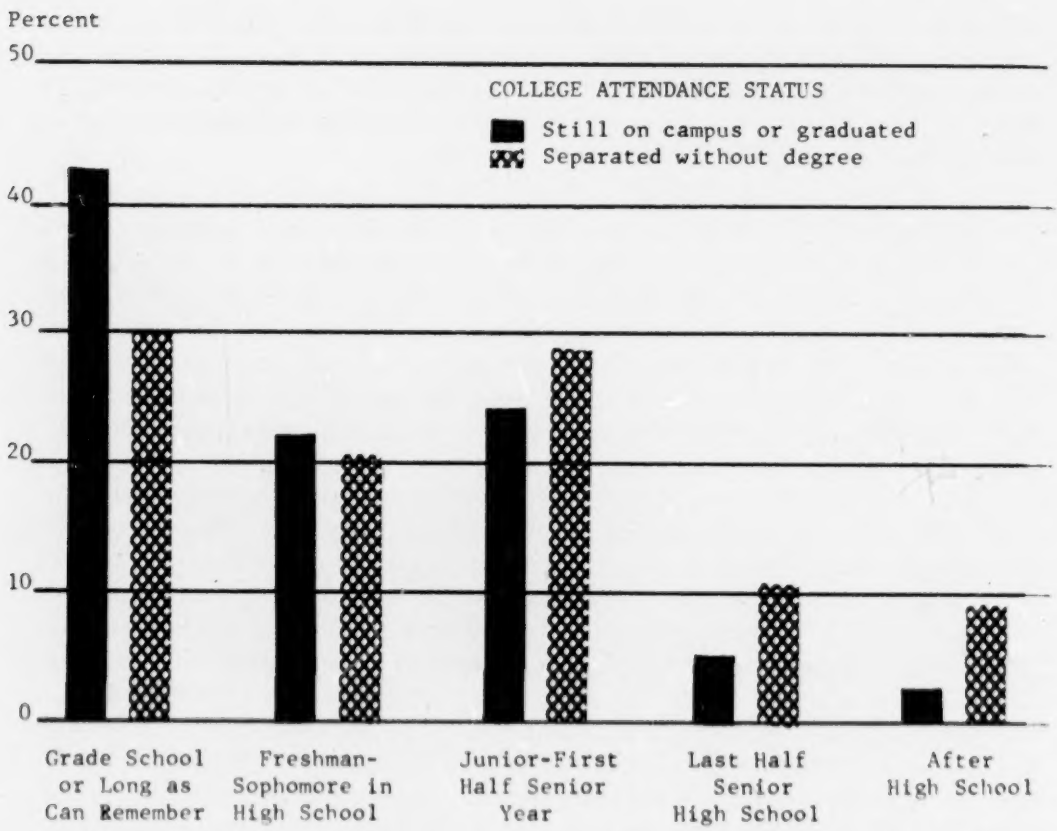

FIG. 2 - Present college attendance status of 1964 College of Agriculture freshmen by time of first serious consideration of college attendance by prior residence.

of their college expenses. No more of those who left than stayed reported work in support of college attendance. However, due to the lower academic standing of those who left, work in support of a college education and maintenance of an adequate grade level would have made survival more difficult for them than for the better academically equipped students who remained in college. Also by virtue of their better academic standing in high school, about 38.6 percent of those who remained, compared to only 13.6 percent of those who left, had the benefit of scholarships while in school. At the same time, comparatively more who remained (84.1 percent and 66.4 percent, respectively) were drawing on their own personal savings. This again indicated a more mature realism and perhaps also willingness to plan and sacrifice for a college education on the part of those who stayed in comparison to those who left, also again suggesting earlier foresight and planning to this end.

Occupational Orientation. An initial expectation that a relatively firm occupational commitment would serve as a force in keeping students in college was not substantiated in this study. Reasoning was that parents often are inclined to insist that boys know what they want to do occupationally before going to college. The proportion who made at least a tentative occupational choice varied no more than one percent from the 54.5 percent 1964 student freshmen

average. However, there was an inclination for those who stayed in college to emphasize the relationship of their college education to their work objectives somewhat more than those who left and for the latter to emphasize relatively more the extrinsic reward (pay, security, and retirement considerations) of an occupation and education for status achievement.

Academic standing. The most distinct and undoubtedly the most significant explanatory difference between the two groups was their academic standing in their high school graduating class. Approximately 79 percent of those who stayed in school and 46.3 percent of those who left rated themselves in the upper academic third of their graduating classes. Although less than 5 percent thought they were in the lower third, the proportion was more than twice as high for those who left as those who stayed. By actual high school percentile rank, 81.9 percent of those who stayed were in the 60th percentile or above, while for dropouts the percentage was only 45.4. The proportion of drop-outs below the 50th percentile was more than twice that of those who remained in the University. Thus, it seems that the majority of those who left college may have been initially poor prospects for success when they came.

In terms of college grade point average, 17.9 percent of those who persisted in school and 82.7 percent of those who left had less than a 2.00 cumulative grade point average for the semesters they spent at the university. On the other hand, 23 of the 145 students who were still in school had grade point averages between 1.50 and 1.99; 28 of the 110 who left fell in this category. If the 19 with a grade point average of above 2.00 are added to these latter 28, then it may be seen that a sizable number of students who left were reasonably very good prospects for college graduation. However, it is entirely possible that some of the better students who left the Columbia campus entered college elsewhere and eventually graduated.

BACKGROUND OF THE STUDENTS WHO STAYED

Any assessment of changes occuring in students during their college experience should be viewed against a background of experiences and conditions from which they came and insofar as possible the state of their thinking and views held at the time they enrolled in college. Some of these have been recognized and described already. Some will be briefly reviewed, others discussed more in detail in the section which follows. However, the focus of attention is on the 145 students who were still enrolled in the Columbia campus colleges during the Winter 1968 semester, and who by normal progression through college would be expected to graduate at the end of that semester.

Prior Residence and Experience

Twenty-seven of the 145 students still enrolled in a Columbia campus college on the restudy date were from small towns or cities and 118 from the open country. The last were mostly from farms rated average and above in income by comparison to others in their own localities by the students' own ratings. Less than 10 percent regarded their farm incomes as being somewhat below their respective area averages. Those who came from small towns and cities were

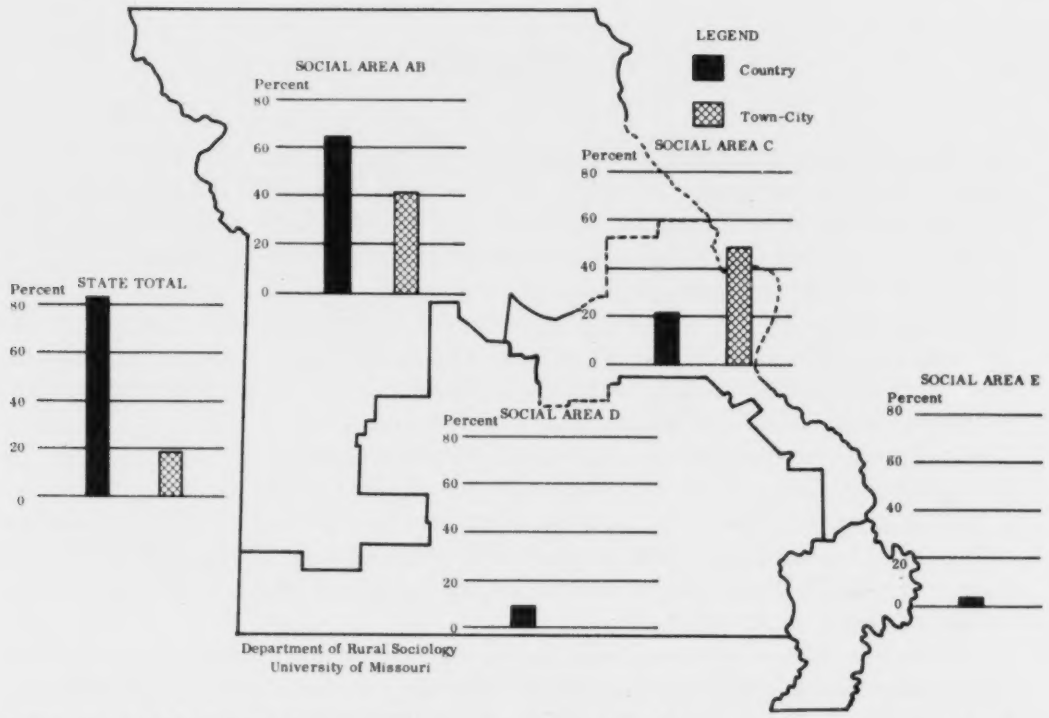

FIG. 3 - Prior residence of students entering the College of Agriculture as 1964 freshmen.

from a variety of occupational backgrounds but in the aggregate of slightly lower prestige than the country students, as indicated by the North-Hatt occupational prestige scale scores. Area-wise, the largest proportion came from the rural-social area near St. Louis, nearly one-half of the town-city boys being from this area (Gregory, 1958). Over one-third came from northeast and west central Missouri (rural social areas AB 3 and AB 4). The Ozarks and southeast Missouri were least represented in this group (See Fig. 3).

Approximately one-fourth had been enrolled in college preparatory courses, in high school, another one-fourth in vocational agriculture, and 29.6 percent in general education. The remainder were quite scattered among other curricula.

Also as noted, they were from the middle and upper academic levels of their high school graduating classes with 80 percent saying they were from the upper third, 82.2 percent for the country and 70.4 percent for the town-city. Their high school records showed that 89.5 percent rated at or above the 50 percentile of their classes. Thus, from the standpoint of high school class performance, the group would be generally rated as good college prospects. Only about six percent of those below the 40 percentile rating of their high school class had survived the college experience.

Views and Occupational Preferences

Approximately 54 per cent of the 1964 Freshmen had chosen a specific occupation at the time they were first interviewed; 75.9 per cent had chosen a major. At least 77 per cent of the town-city youth had selected a specific occupation, which was a proportion much larger than for the country boys, only 48 percent of whom expressed an occupational choice. Aside from the great majority who selected professions, 28 percent of the country boys expected to farm,

but only 8.5 per cent had a preference for business or sales. Within the highly predominant professional category, the town-city students chose occupations labeled professional-non-agricultural of which veterinary medicine was predominant. The country youth also chose the generally non-agricultural professions over the strictly agricultural, e.g., vocational agriculture teacher, county extension agent, etc. at a ratio of about three to two. Typical occupations in the non-agricultural professions were veterinary medicine, journalism, and research; in the agricultural professions landscape design or engineering, soil or wildlife conservation, and dairy manufacturing and sales.

Students' reasons for coming to college were assessed by means of Q-sort methodology. This provided a rating scheme which required students to rate an initial 64 possible reasons for coming to college into a most unimportant-most important 11 point range with progressively more allowed in the middle than at each extreme. This provided a relative rating scheme in which every reason was rated in relation to all others.[1]

A major reason for enrollment in virtually all groups was a strong occupational orientation. Of the 64 reasons for attending college in the original Q-sort from which to choose, both groups rated the following occupational item highest of all: "I want my university work to relate closely to my vocational goal, i.e., to help me with my future career." The town-city boys placed an even higher rating on this item than those from the country, 9.6 and 9.1 respectively, on an 11 point scale. Next in order for both was the view: "It takes a college education to get a good job these days." There was a strong secondary interest in both learning for learning's sake and in becoming a more complete and well-rounded person (Lionberger, Gregory, and Chang, 1967).

There was considerable variation in the importance attached to the qualities of an occupation which they would stress as most important to themselves, but the inclination was to emphasize an occupation from an idealized standpoint both as a means of extending one's own personality or of using one's skills to best advantage on the one hand, and the extrinsic rewards derived from such things as income, security, and a good retirement plan on the other.[2] These two were emphasized over the management-creativity view and what we will subsequently refer to as a materialistic-doer view. The latter stressed work outside, close to nature, and with things in preference to people. The country and town-city groups differed most on the materialistic-doer view with the former stressing this more than the latter; also the country youth were least concerned with matters such as creativity and management possibilities.

Occupational interests tended to be quite narrow in scope and generally not particularly strong. Strong Vocational Interest Inventory scores available for 114 of the 145 students indicated most frequent interests similar to those engaged in farming and veterinary medicine.[3] Farming was the predominant in-

1 For more information about how Q-sort was used in this study and references as to its strengths and limitations see pages 30-31 and 57-58 of this bulletin.

2 The different ways of viewing an occupation from an idealized point of view and the method used to determine these views are discussed on page 49 to 50 of this bulletin.

3 See pages 45-48 of this bulletin for a more detailed discussion of the use of Strong's Vocational Interest Inventory.

terest for 46.4 percent of the country and 10 percent of the town-city youth while veterinary medicine scored first for 25 percent of the latter and 9.6 percent of the former. This was a comparative rating out of 55 occupations for which interest scores were computed. Also, a considerable number expressed an interest in the physical therapist-biological science combination, actually accounting for first order interests in 20 percent of the town-city and 4.3 percent of the country youth. First order interests in other occupations were scattered over a great diversity of areas, none accounting for any more than one student in the town-city group or more than five of those from the country.

Academic Majors Selected by Freshmen

A student may or may not declare an academic major when he enters the College of Agriculture as a freshman. The fact that this is not required of a student until his fourth semester permits some latitude and flexibility for those not definitely decided about a course of study. Almost one-fourth of the entire group did not declare a major as first semester freshmen. A noticeable difference was observed in that only 3.7 percent of the town-city group did not do so, while for the country students this was 28 percent.

Over half had chosen a major in the agricultural production fields or in preveterinary medicine, 24.8 percent and 26.9 percent, respectively. Vocational agriculture was selected by 8.3 percent, the remainder being scattered among the agricultural sciences, social sciences, and "other practicing professions." More country students selected majors in agricultural production, more town-city students in veterinary medicine.

THEIR COLLEGE EXPERIENCE

An agricultural college student on the Columbia campus may participate in the student sub-culture by taking college courses, joining social or fraternal organizations, working on the campus, and participating in a wide variety of academic, honorary, professional, and organized campus activities as well as those that relate to the religious and civic life of the community.

During the first two years a student is required to take a variety of prescribed courses in the basic sciences (biological, chemical, and physical), English composition, mathematics, the humanities, and the social sciences, in order to build a broad science and humanities base upon which to base a major course of study. After the initial two years, he is permitted to specialize in earnest. Upon entry into the college as a freshman he is assigned an academic adviser with whom he may consult on any matter which he wishes to bring to the adviser's attention. He may also consult with other members of the teaching, extension, and research staff.

Interaction With Adviser and College Staff

One may immediately ask what chance a student in a large university has to consult with an adviser and the college staff, and also "with what effect." In order to answer the first question, a series of questions about relations with the

student's own adviser and the college staff were asked in the 1968 interview. Perhaps the "what effect" question will remain essentially unanswered except for inferential observations which are presented later in the bulletin. The series of response relationships included a variety of academic, personal, and social matters ranging from the very intimate to those that were quite impersonal in nature. Each student was then asked to indicate whether he thought the kind of relationship was "not possible," "possible," or "maybe possible." These were arranged on the basis of the frequency with which students said each was possible. These responses are graphically represented by black solid lines in Fig. 4. The proportion who thought that such relationships might be possible were added and designated by cross-hatched additions to the black bars. The reader is invited to observe the results. The students were then further asked to indicate the number of faculty members with whom they thought the designated relationships would be possible. These responses are reported in Table 1.

A valid conclusion from the responses reported in Fig. 4 would seem to be that a very high proportion of the students felt they could discuss study programs, grades, decisions that would affect their future, or obtaining a recommendation with their advisers. Most felt that friendly relations were possible, this being indicated by the very high percentage who felt they could walk into the adviser's office either to talk about school problems or for a friendly chat, and the relatively high proportion who thought that the adviser knew them by name. The greatest reticence, self-imposed or otherwise, was a feeling of reluctance to talk about problems which might make dropping out of school necessary and understandably also a reluctance to stop by the teacher's home for a short chat. Another indication of closeness was manifested by 66 percent who felt that their advisers had a real interest in their own problems.

There were some quite consistent differences between the country and town-city students. The latter seemed to feel less free than country boys to enter into the designated relationships with their advisers; however, the negative and "maybe so" responses need to be interpreted in light of the possibility that a considerable number of students had known their advisers for only relatively limited periods of time. It is a common practice to change advisers when an election is made to change majors; almost 58 percent of the students still in school in 1968 had changed majors at least once during the four year period.

Although the number of faculty with whom students thought the designated relationships were possible was indeed often small in number, there were relatively few students who knew no faculty member with whom they could enter into the designated relationships. Two exceptions to this general observation are the 39.3 percent who did not feel that they could stop by a faculty member's home for a short visit and 37.2 percent who felt reticent to talk to any faculty member about problems that might cause them to drop out of school.

However, for those matters most central to the student's academic life there were on the average at least three faculty members and sometimes eight or 10 with whom he felt he could probably speak. Thus, it does not seem that the College of Agriculture students in this study at the end of four years in college would have any reason to feel alienated by being cut off from meaningful contacts with the faculty.

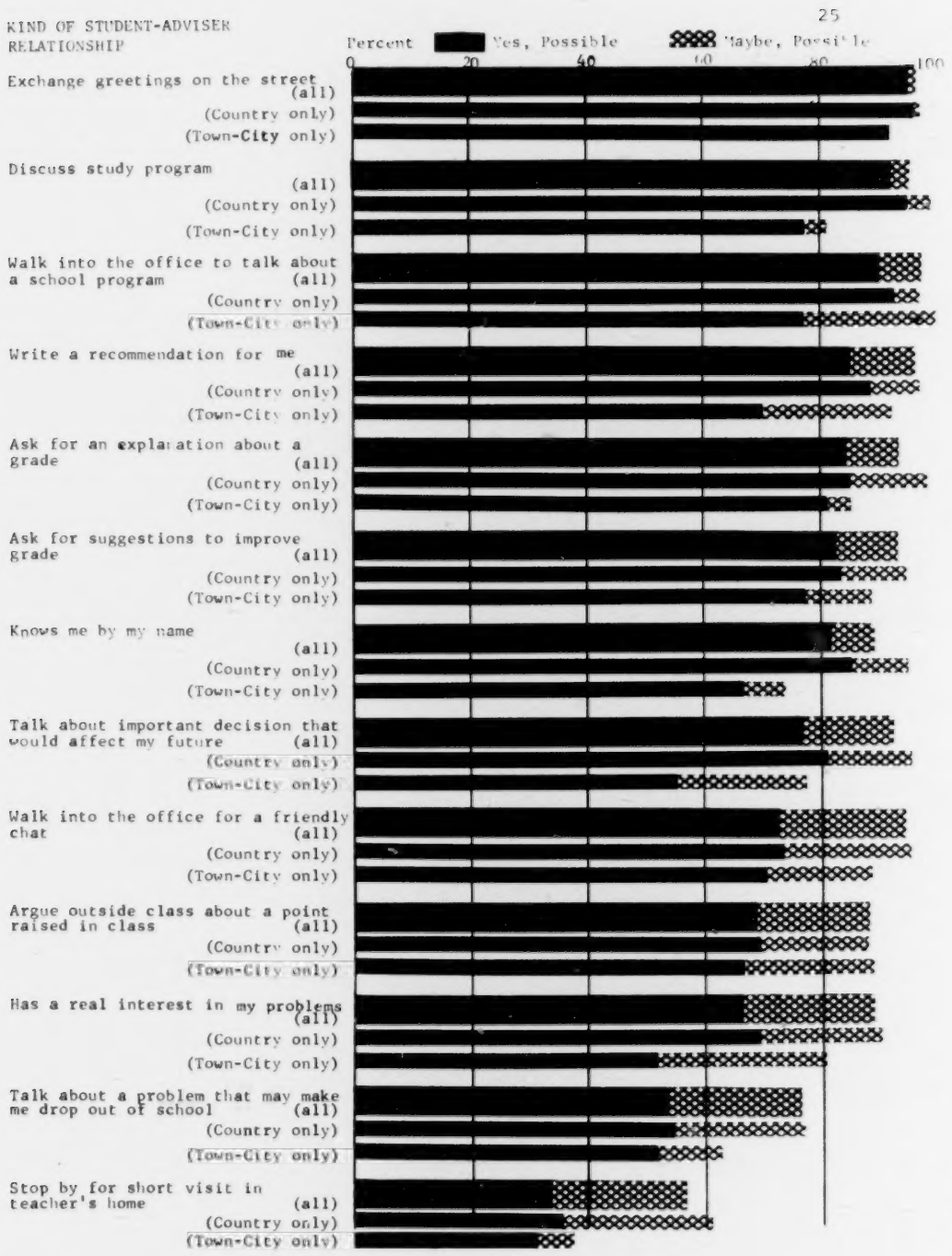

FIG. 4 - Percentages of college students from county and town-city areas who designated various relationships they deemed possible with their student advisor. (College of Agriculture student panel.)

TABLE 1--PERCENT OF COLLEGE OF AGRICULTURE STUDENT PANEL CLASSIFIED BY NUMBER OF UNIVERSITY FACULTY MEMBERS WITH WHOM THEY THOUGHT DESIGNATED RELATIONSHIPS WERE POSSIBLE (1968) AND PRIOR RESIDENCE

PRIOR RESIDENCE Kind of Student-Faculty Relationship	Estimated Number With Whom Relationship Was Thought Possible					Median Number
	*None	1-2	3-4	5-9	10 or more	
ALL STUDENTS (N = 145)						
Exchange greetings on the street	1.4	9.7	22.8	24.1	41.3	8.1
Discuss study program	7.6	35.1	31.7	15.9	9.7	3.5
Walk into office to talk about a school problem	3.4	28.3	32.4	15.2	20.0	4.1
Write recommendation for me	3.4	32.4	43.5	13.8	6.9	3.7
Ask for an explanation about a grade	1.4	5.5	27.6	17.2	47.6	9.5
Ask for suggestions to improve grades	2.8	17.9	28.3	13.1	37.2	5.0
Knows me by my name	5.5	22.1	34.4	22.8	15.2	4.3
Talk about important decision that would affect my future	11.7	40.7	33.8	6.9	6.9	2.9
Walk into the office for a friendly chat	2.8	25.5	40.7	18.6	12.4	4.1
Argue outside of class about a point raised in class	6.2	31.7	33.2	11.7	17.2	4.7
Has a real interest in my problems	13.1	44.9	26.2	10.3	4.8	2.6
Talk about a family problem that might make me drop out of school	37.2	46.3	12.4	3.4	0.7	1.6
Stop by for a short visit in teacher's home	39.3	41.4	12.4	2.1	3.4	1.5
COUNTRY STUDENTS (N = 118)						
Exchange greetings on the street	0.9	10.2	22.9	22.9	42.2	8.5
Discuss study program	6.8	35.6	33.8	15.3	8.5	3.5
Walk into office to talk about a school problem	4.2	28.8	30.5	15.3	20.3	4.1
Write recommendation for me	3.4	31.4	44.0	13.6	7.6	3.7
Ask for an explanation about a grade	1.7	5.1	28.0	17.8	46.5	9.3
Ask for suggestions to improve grades	2.5	17.8	29.7	12.7	36.4	10.0
Knows me by my name	5.9	22.9	33.9	22.9	14.4	4.3

TABLE 1--(Continued)
PERCENT OF COLLEGE OF AGRICULTURE STUDENT PANEL CLASSIFIED BY NUMBER OF UNIVERSITY FACULTY MEMBERS WITH WHOM THEY THOUGHT DESIGNATED RELATIONSHIPS WERE POSSIBLE (1968) AND PRIOR RESIDENCE

PRIOR RESIDENCE Kind of Student-Faculty Relationship	*None	1-2	3-4	5-9	10 or more	
Talk about important decision that would affect my future	10.2	42.3	33.1	5.9	8.5	2.9
Walk into the office for a friendly chat	2.5	26.3	39.0	18.6	13.6	4.1
Argue outside of class about a point raised in class	7.6	30.5	34.8	11.0	16.1	3.7
Has a real interest in my problems	12.7	44.0	28.0	9.3	5.1	2.2
Talk about a family problem that might make me drop out of school	33.9	49.1	11.9	4.2	0.9	1.7
Stop by for a short visit in teacher's home	37.3	42.4	11.9	2.5	4.2	1.6
TOWN-CITY STUDENTS (N = 27)						
Exchange greetings on the street	3.7	7.4	22.2	29.6	37.1	7.3
Discuss study program	11.1	33.4	22.2	18.5	14.8	3.5
Walk into office to talk about a school problem	0.0	25.9	40.8	14.8	18.5	4.2
Write recommendation for me	3.7	37.0	40.8	14.8	3.7	3.5
Ask for an explanation about a grade	0.0	7.4	25.9	14.8	51.9	10.1**
Ask for suggestions to improve grades	3.7	18.5	22.2	14.8	40.8	6.9
Knows my by my name	3.7	18.5	37.1	22.2	18.5	4.5
Talk about important decision that would affect my future	18.5	33.3	37.1	11.1	0.0	2.9
Walk into the office for a friendly chat	3.7	22.2	48.2	18.5	7.4	4.0
Argue outside of class about a point raised in class	0.0	37.1	25.9	14.8	22.2	4.0
Has a real interest in my problems	14.8	48.2	18.5	14.8	3.7	2.5
Talk about a family problem that might make me drop out of school	51.9	33.3	14.8	0.0	0.0	0.0
Stop by for a short visit in teacher's home	48.2	37.0	14.8	0.0	0.0	1.1

* Percents do not add to 100 in every case because unknowns are excluded.
** Median computed with 10 and over category closed at 20.

Work Experiences

A second way that students can participate in the college sub-culture is through work experiences which vary considerably in their contribution to the educational objectives of the student. The influence may be quite direct when the job is actually or potentially career oriented. Even though not directly relevant, work experiences within the university provide an opportunity for acquaintances and interaction with faculty and students that otherwise would not be possible. There surely are some latent consequences of having to or electing to work as a means of paying part of one's college expenses; some positive as helping to create a mature realism, and some negative like making it more difficult to maintain a high grade point average.

It will be seen from Fig. 5 that the proportion employed, which initially was about 40 percent for the country boys, increased to approximately 65 per-

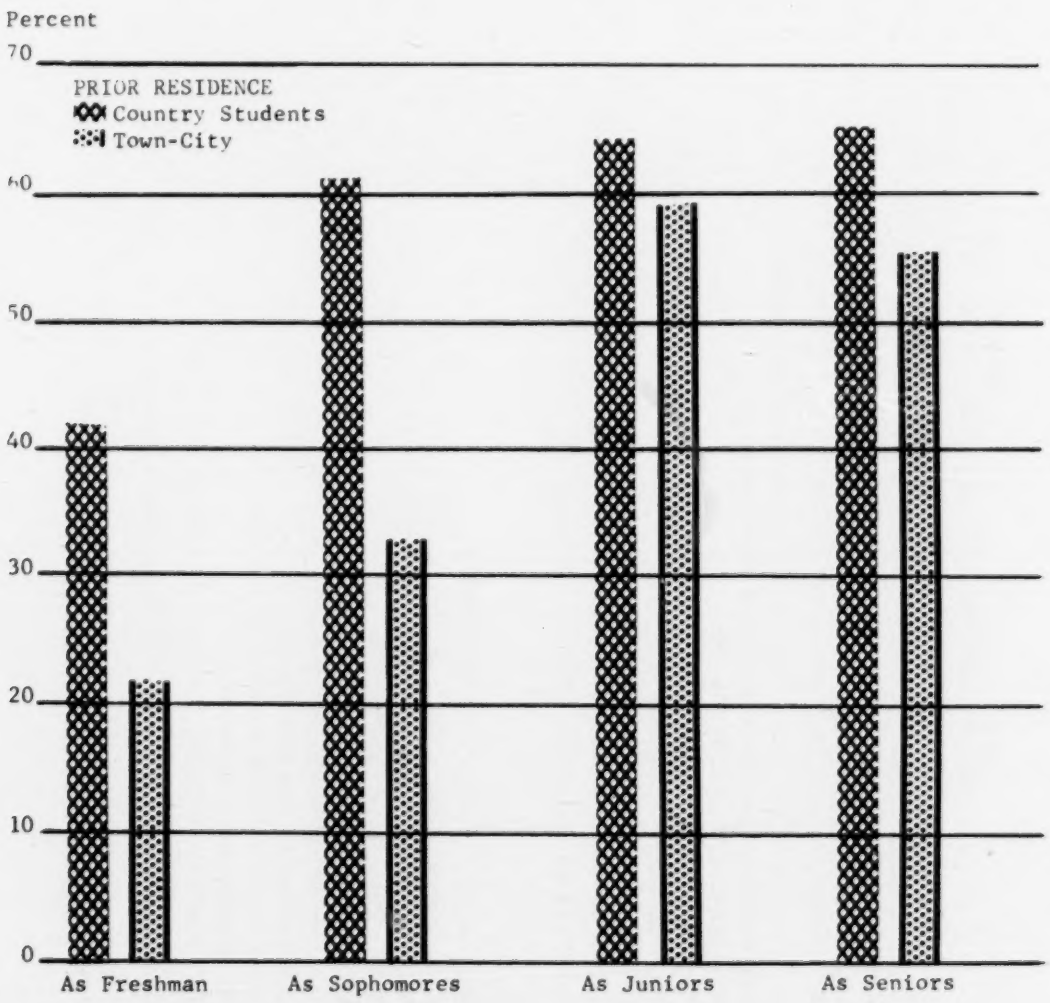

FIG. 5 - Proportions of county and town-city students working during different years in college. (College of Agriculture student panel.)

cent by the senior year. Throughout the time span from the freshman to the senior year fewer town-city than open country youth were employed. Median hours per week by those who were employed were in the range of 16 as freshmen, a figure that had increased slightly by the senior year, as will be seen in Fig. 6. Except for the freshman year, when town-city youth worked somewhat more hours than the country youth, medians did not vary materially between the two groups.

Approximately 85 percent of the country and 81.5 percent of the town-city youth indicated employment at some time during their college careers. Some 41.5 percent of the country and 37.0 percent of the town-city were in work related to their current college major. About one-fourth of the former and 37.1 percent of the latter had been engaged in non-university employment not related to their majors. With a third of the students employed outside of the university, it can be seen that the local community was serving an important employment role for students in the college. In fact almost one-half of the town-city youth had been so employed.

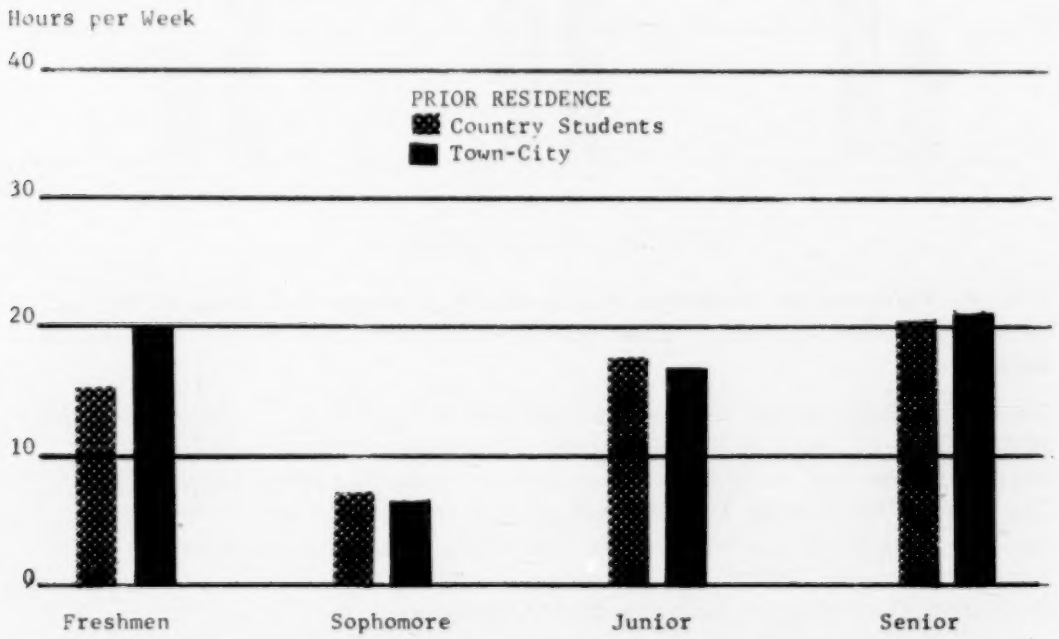

FIG. 6 - Median hours worked per week by country and town-city members of College of Agriculture student panel. (Median for those who worked.)

Financial Support

Even though working to pay college expenses may not be regarded as direct participation in the college sub-culture, it is often a very important conditioning influence on the extent and manner in which the student does participate. Support for a college education for the students in this sample came primarily from parents, earnings of self or spouse, savings, scholarships, and loans.

The most typical parental support situation for country youth at the senior level was for parents to pay less than one-fourth of their college expenses (44.1 percent) and for town-city parents to pay more than one-half (48.2 percent) (See Fig. 7). About 70 percent of the former were paying half or more of their expen-

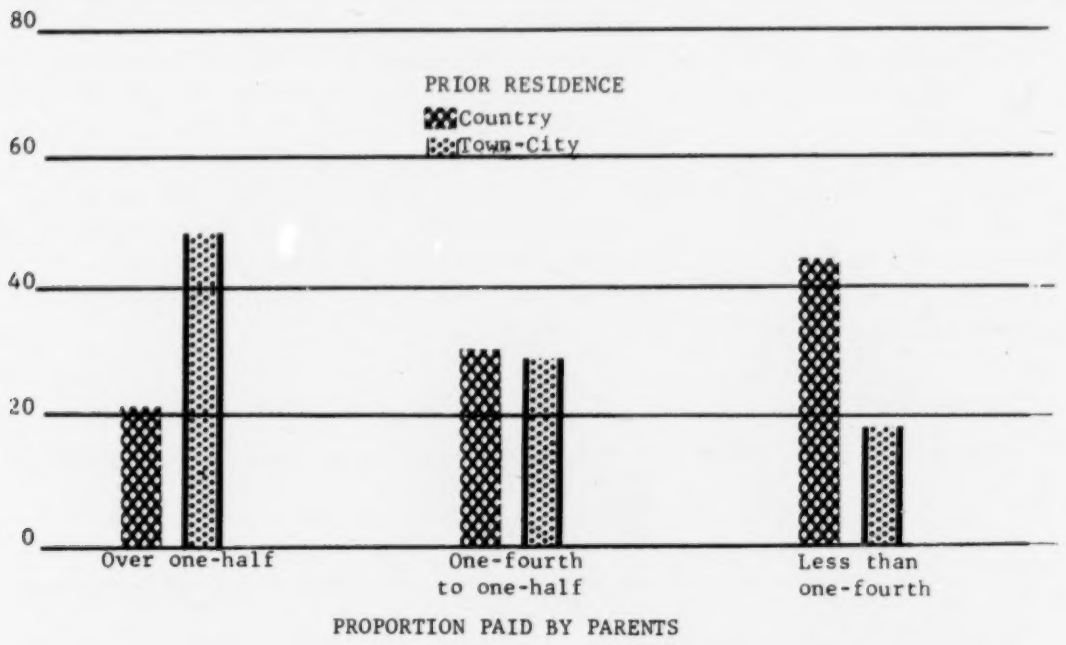

FIG. 7 - Percentages of country and town-city students in College of Agriculture Panel indicating various proportions of their college expense were paid by parents.

ses out of their own or their wives' earnings compared to 33 percent for the town-city youth. Although 37.1 percent of the latter were earning between one-fourth and one-half of their expenses, approximately 30 percent earned less than one-fourth (See Fig. 8). Even though the country boys much more frequently had scholarships than town-city (48.3 percent compared to 14.8 percent), they were much more likely to have acquired loans, (28.0 percent and 7.4 percent, respectively), to help pay their expenses (See Fig. 9).

All things considered, the country boys were generally much more self-reliant in paying their college expenses than the town-city. Also for both groups it was quite apparent that more than parental resources was needed to finance their schooling; this despite considerable reliance of students on their own resources.

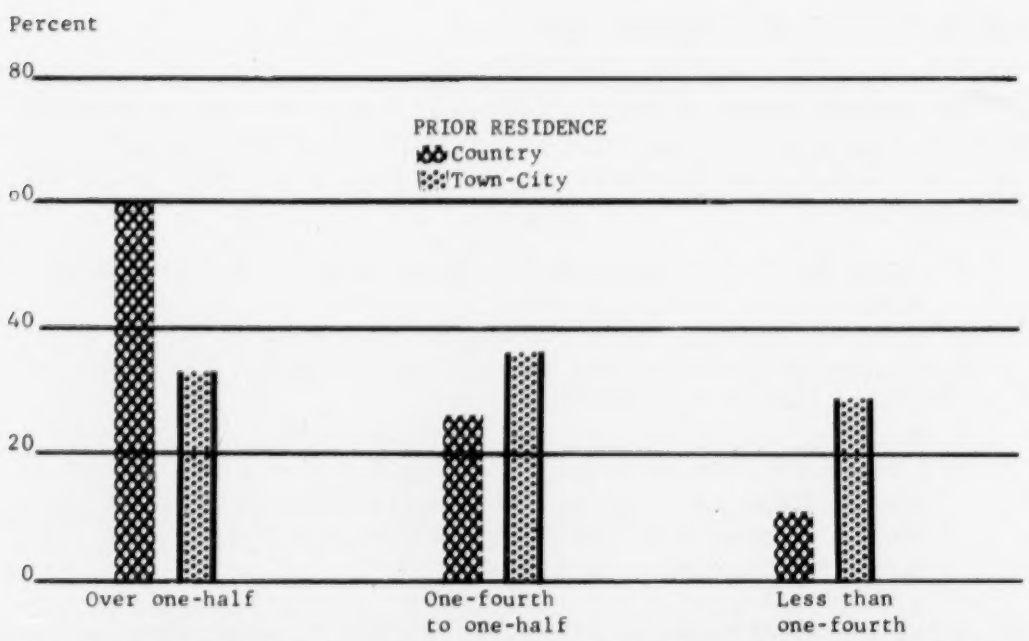

FIG. 8 - Percentages of country and town-city students in College of Agriculture panel indicating different proportions of college expenses were paid from own earnings or savings.

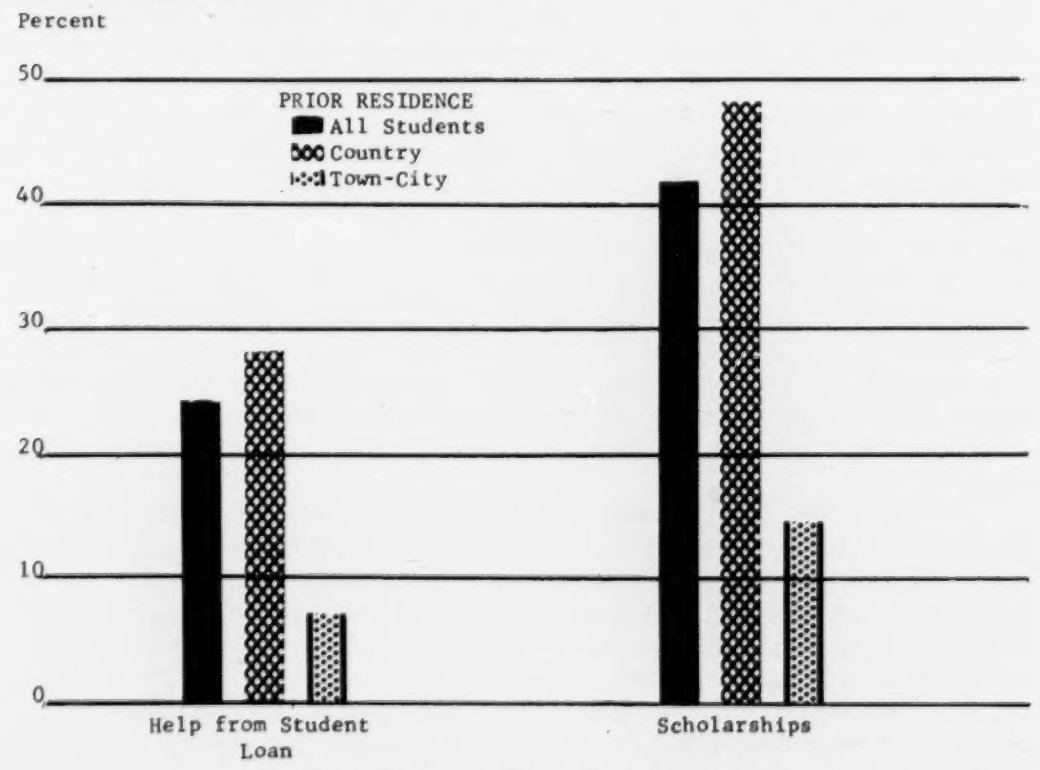

FIG. 9 - Percentages of country and town-city students in College of Agriculture panel who obtained assistance from loans and grants.

Participation in Campus Organizations

The university campus provided many opportunities to participate in organized activities related to specific interests as well as to matters of general concern on the campus and even to the local community. Organizational activities of the formal group type were classified as follows for observational and analysis purposes:

1. Academic—various departmental and divisional clubs mainly of academic concern.
2. Honorary scholastic—including both agricultural and general.
3. Social fraternal—comprised mainly of social fraternities and organizational activities related thereto.
4. Religious—mainly those of a general orientation, e.g., the YMCA.
5. University-wide organizations—including a diversity of activities and interests which cut across department and divisional lines and in which students participate on a cross campus basis, e.g., student government, Savitar frolics, interfraternity council.

An attempt was made to include all organizations in which students might participate, but the others were generally so infrequently mentioned that further classification was not warranted.

Although participation in organizational groups on the campus most likely occurred as an outlet for self expression and personal satisfaction derived from interaction with peers who had similar interests and concerns, it also contributed to the fulfillment of the students' educational objectives. For students who expressed a high concern for learning to get along with other people and for becoming a more complete and well-rounded person, participation in these activities surely provided an educational increment; also depending on the activity selected; for those who expressed the desire to make one's life count for other people participation may have been something of a personality fulfillment. In a student's own academic area, there was an opportunity to engage in activities of common concern to the particular profession or academic interests. The honorary scholastic contingent provided an additional reward mechanism for those who strived for academic excellence. There was also something for the activist. Many of the organizations provided a democratic frame-work in which concerned students could act on matters about which they had deep convictions or concerns.

In turning first to an examination of the amount and kind of social participation of the students at the time of the 1968 resurvey, a need for some kind of aggregate measure of participation became immediately apparent. An instrument similar to that used by Chapin seemed appropriate in this case (Chapin, 1935). He recognized that a person can participate by being a member, attending meetings, paying one's dues, serving on committees, or as an officer in the organization. He further found that judges rated participation in formal organizations in an ascending order of importance in this approximate sequence. With modifications to allow a differential credit for varying amounts of participation in the organizational activities and deletion of dues-paying which is of little con-

sequence in some of the organizations considered here, a scoring scheme with points assigned as follows was used:

membership, one point;
limited attendance, one point;
regular attendance, two points;
committee member, three points;
and officer, four points.

The total participation for each students was computed by scoring them on participation in each of the organizations to which they belonged and adding the credits assigned to arrive at a total score. With 84 percent of the students participating in one or more such groups, a median score of 9.48 occurred or roughly the equivalent of being an officer and an active participant in one group or being a member and regularly attending meetings in two. Even though far more country than town-city boys participated in no such organization, the median participation score for the country boys was somewhat higher than for the town-city, thus something of a bi-modal participation situation (See Fig. 10). It will be fur-

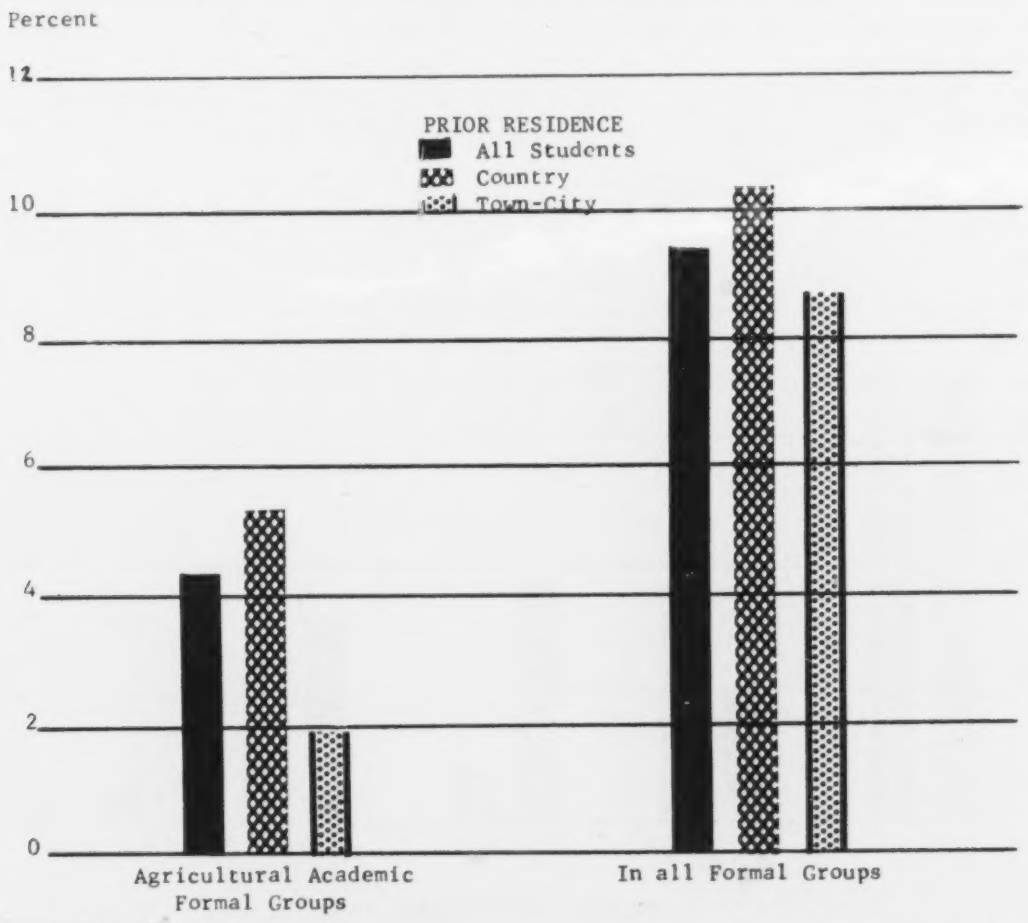

FIG. 10 - Median formal group participation scores of country and town-city students in College of Agriculture panel.

ther seen that this difference was particularly large for participation in academic clubs and organizations.

From the standpoint of the categories mentioned, participation in the academic sector was the greatest. This accounted for over half for country boys and a somewhat lower relative proportion for the town-city boys. Although academically labeled, these organizations had social activities which were also a part of the normal routine. Although likely quite conducive to intellectual enrichment in the respective academic specialties, participation in such organizations to the relative exclusion of others could result in a kind of academic provincialism.

Perhaps participation in university-wide organizations provided the best opportunity for broad interest contacts and thus a diversity of exposure to new ideas and views. The percent of students participating at various levels is indicated in Figure 11. From this it can be quickly seen that participation in university-wide organizations by College of Agriculture students was by no means universal with 33.3 percent of the town-city and only 20.4 percent of the country boys participating in any degree. However, there was a small group of country boys who were indeed very active in campus-wide organizations. Participation of the town-city youth was more general but generally at a considerably lower level.

Next to those of a university-wide nature probably social organizations provided an opportunity for interaction with students holding a diversity of

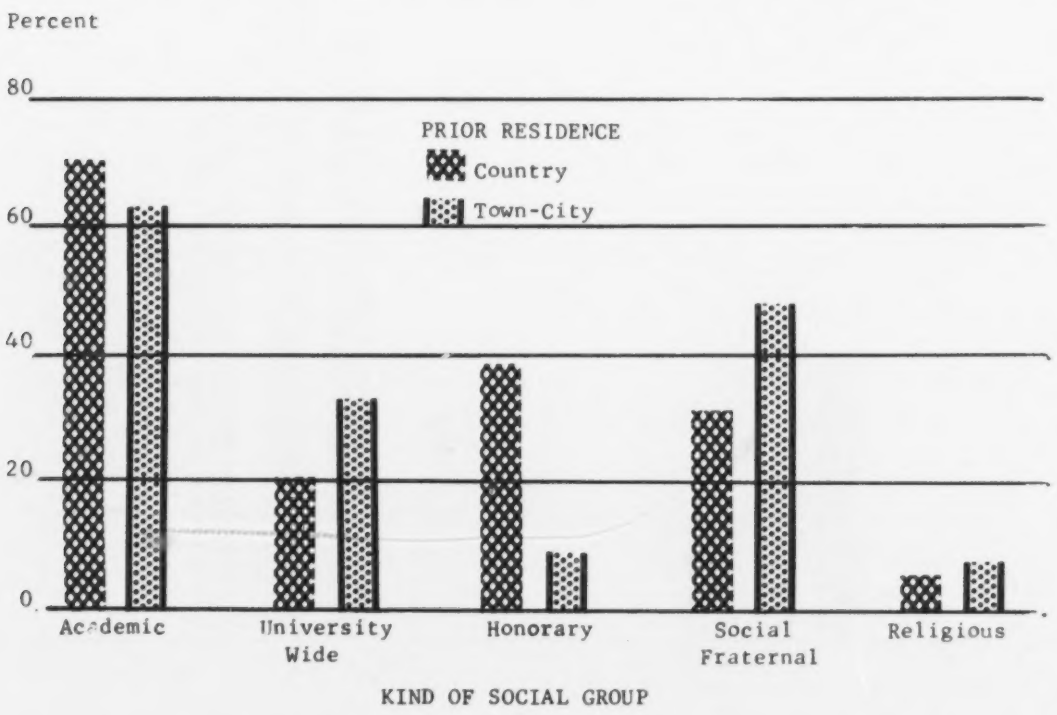

FIG. 11 - Proportions of country and town-city students in College of Agriculture student panel who participated in various kinds of formal groups.

views and interests. This was found somewhat restricted by the fact that agricultural students tended to be found proportionately more in some fraternal organizations than in others. By being somewhat restrictive in terms of rules for inclusion and circumstances which operated in the direction of exclusion, only 31.4 percent of the country and 44.4 percent of the town-city boys were associated with such groups. The necessity to work and earn one's way through college may have served to exclude more country than town-city youth; also it is quite possible that the country boys thought participation in other types of organizations was more important.

In any case with university-wide groups the inclination was either not to participate at all or to participate extensively, i.e., at least as a top leader in one organization as well as active participation short of being an officer in at least one additional. This tendency to bi-modal participation tended to be greater for the country than for the town-city boys. Thus, somewhat like viewing television (Coleman, 1961), participation above some critical minimum level impels the participant to even higher involvement.

Participation in religious groups on the campus could likewise be an essentially cosmopolitan experience if predominately in cross-denominational organizations such as the YMCA in contrast to those restricted to a particular religious denomination or sect. However, further pursuit of this point would be quite academic here since 94.1 percent of the country and 92.6 percent of the town-city students participated in no formal religious group. However, this does not necessarily mean that they were also disassociated from religious activities in the local churches of their choice.

Finally, most students did not participate in selective academic and honorary organizations. Admission to such organizations is by invitation for which a measure of academic excellence and leadership is generally required. In this category country boys were far ahead of the city youth with 38.1 percent and 14.8 percent, respectively, participating at some levels. But differences did not end here. Again the participation level was distinctly bi-modal, i.e., with most not participating at all and very few at a very high level. Again a critical level of participation contingent upon a measure of academic excellence seems to have generated even higher levels of participation. But for a very few exceptions this critical level of participation seems not to have materialized in the town-city student contingent.

It could be that the basis upon which honors in this area were awarded were such that they disproportionately favored the country boys, who were probably more agriculturally oriented in comparison to the town-city who had an inclination to occupational interests peripheral to the agricultural enterprises. An alternative hypothesis would be that the country boys attracted to the college were disproportionately high academic achievers. This hypothesis would seem to be supported by the fact that a much higher proportion of country than town-city youth came to the college with scholarships. This further suggests that a different kind of selectivity may have been working to attract students to the college in each case, with greater selectivity in terms of academic competence operating for the country boys.

Some light may be thrown on the reasons for differential participation rates by examining the student's own estimate of importance attached to the different organizations on the campus. Thus, after looking at the long list of on-campus organizations to inventory membership and participation, each student was asked to indicate (1) which organization he thought was most important, (2) the one he felt the closest to, and (3) the one in which most of his friends were. We are concerned here primarily with responses to the first question.

In assigning meaning to the frequency of mentions of importance within categories, it is necessary to recognize that each category is composed of a number of organizations in which only a few students participated. The aggregate percentages are thus the sum of most importance ratings assigned within each. This fragmentation was particularly large in the academic category where at least 16 organizations were involved, no one of which received as many as 5 percent of the total "most important" mentions. Thus, the 26.9 percent who rated academic organizations as most important is this kind of an aggregate (See Fig. 12). Collectively 27.6 percent of the students mentioned social organizations, thus placing their group at the top of the list. However, if the 11.0 percent who mentioned honorary organizations are added to the 26.9 percent who mentioned academic as they logically may be, organizations most central to the academic function of the college take a substantial lead in importance ratings assigned. About 16.0 percent gave no response to this question and mentions of other groups were so diverse that no further classification seemed warranted.

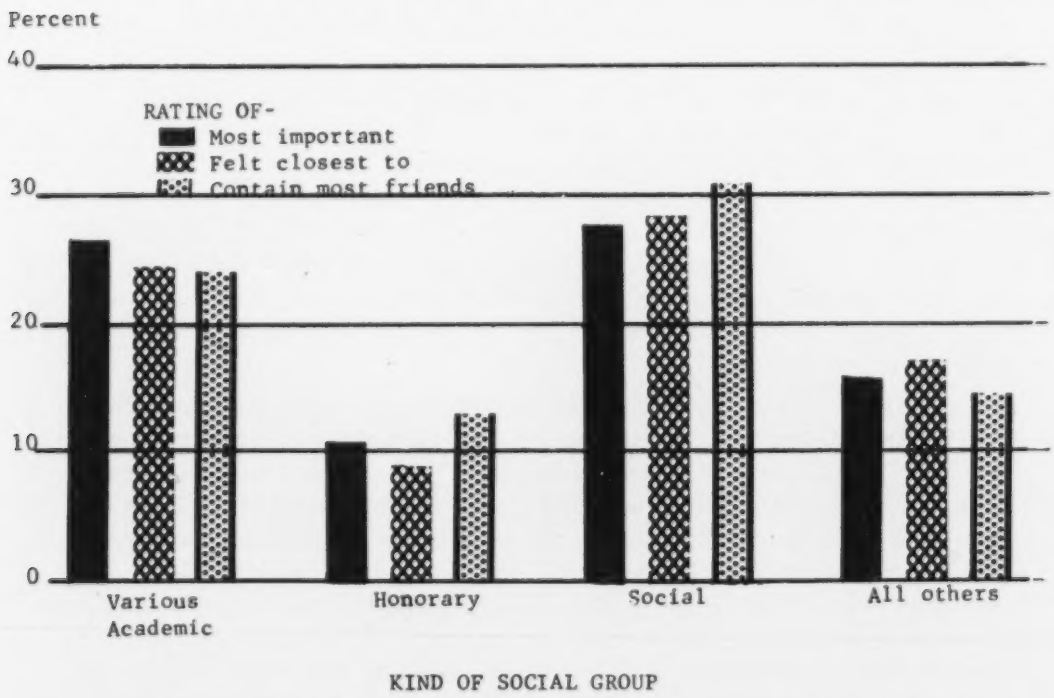

FIG. 12 - Proportions of country and town-city students in College of Agriculture student panel who rated different types of organizations highest for three specified reasons.

Responses to the question asking students to indicate the group to which they felt closest very closely paralleled their "most important" ratings except for a somewhat smaller percent indicating that they felt close to the honorary formal groups.

A final question in regard to participation in formal social groups relates to the manner in which such participation varied from the freshman to the senior years. Students were asked to indicate the number of organizations to which they belonged in each of the intervening years. The results are graphically presented in Fig. 13. The white bars indicate the percent not involved in any formal group participation in each of the years. It can accordingly be seen that the percent of country youth not participating in any formal group decreased up to the senior year after which the proportion increased slightly. For the town-city boys there was a tendency for no participation to plateau for the first three years and then to increase sharply in the fourth year.

Looking further at the other extreme, namely the percent of students who participated in four or more formal groups, there was a sharp increase from the freshman through the junior year and then a decline for country youth. For the town-city youth, the tendency was for membership in that number of organizations to start and end at a relatively low level with highest participation occuring in the intervening years. It seems that there was in inclination in both groups to withdraw somewhat from participation in formal social groups during the senior year, no doubt in deference to other things considered more important and necessary.

This observation was borne out by the students' own views, the town-city boys in particular, 66.7 percent of whom indicated that they thought they were less active in the formal organizations during their senior than their freshman year. Slightly over half of the country boys thought they were less active as seniors. The others felt that the reverse was true.

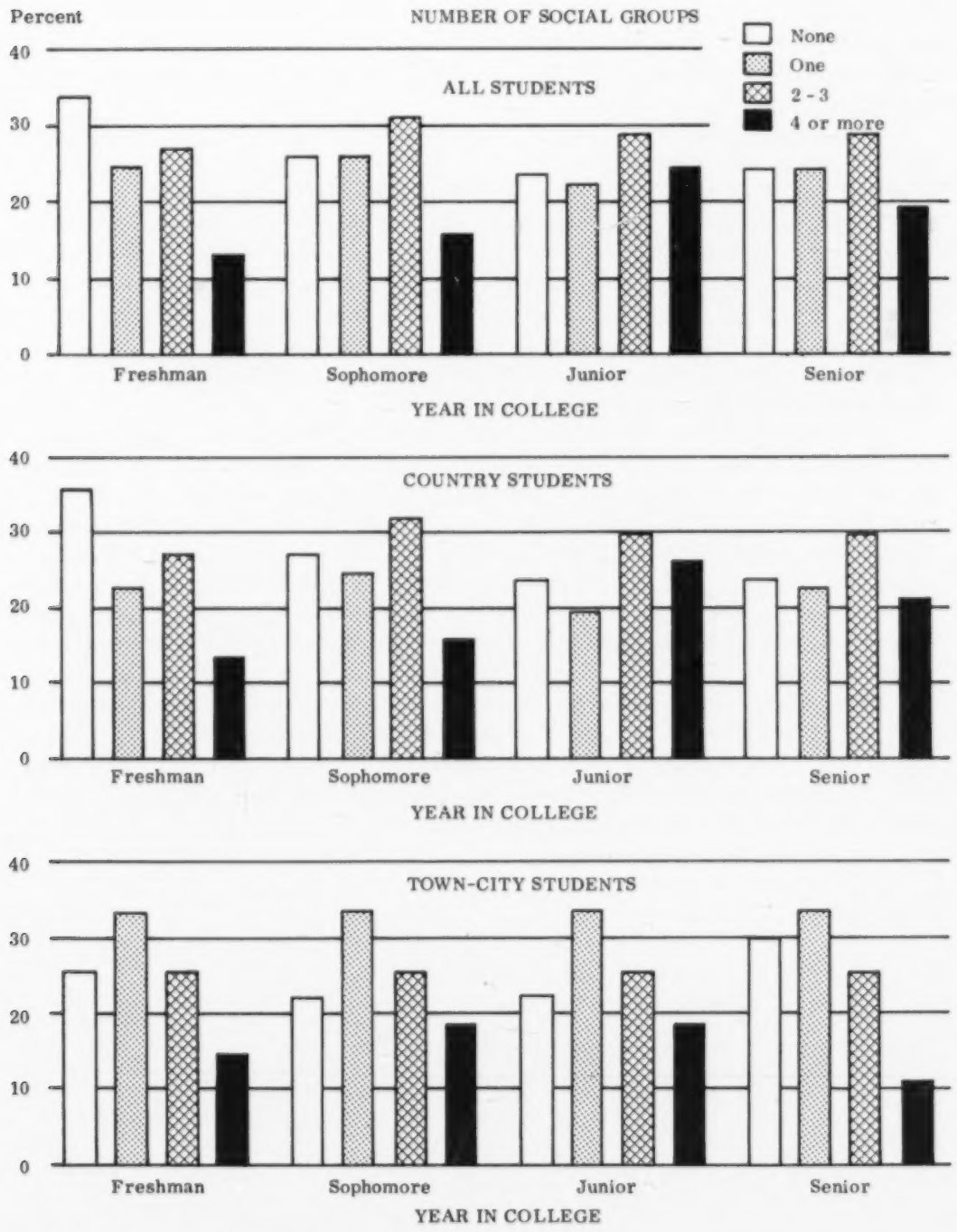

FIG. 13 - Percentages of country and town-city students in College of Agriculture student panel who took part in various numbers of groups during each year they attended college.

SOCIALIZING EFFECTS OF THE COLLEGE EXPERIENCE

Surely there must be many effects of a college campus experience on students. It would be presumptuous to think that such a study as this could make an assessment of their extent and nature; nor in the absence of adequate controls can it be said with certainty that the changes during the interim period were truly the result of the college experience. However, for the changes considered a casual or conditioning influence may be a fair assumption. There were (1) changes in perceived reasons for coming to college, (2) changes in majors, and (3) changes in occupational orientation including interests, idealized views of an occupation, and the vocational choices made. These are examined and discussed in order in the pages which follow.

Changes in Reasons for Coming to College

The reasons why 1964 Freshmen entered various colleges in the University was the subject of another publication (Lionberger, Gregory and Chang, 1967). This study, which included an original random sample of 100 College of Agriculture students who were also a part of the present study, showed a very heavy orientation to occupational considerations both as a means of self expression and for security, money, and retirement considerations as reasons for coming to college. These students also expressed a strong secondary interest in the broader aspects of a college education. It was expected that this orientation which was characteristic of the 1964 freshmen students generally would recede and that other reasons would emerge as more important.

Two approaches were used to test this general hypothesis; one was to ask the 85 students from the 1964 freshman class who did not originally do a Q-sort of 64 reasons for coming to college to estimate whether they regarded each of 10 reasons as being much less or much more, a little less or a little more important now than when they came to the University in 1964 (a neutral "about the same" category was also allowed). The response items selected closely paralleled those that were originally rated high in 1964 by the Q-sort sample of students.

Sixty of the 100 who originally did the Q-sort of reasons for coming to the University were still in school on the Columbia campus in 1968. The 1964 Q-sort required the arrangement of 64 reasons on an importance-unimportance category range with a few items permitted at each extreme and progressively more in the direction of the middle neutral range. The 60 students were asked to do a partial Q-sort of 19 items originally rated highest in 1964. The one exception was "the social aspects of college are really more important than the grade I receive" which was originally rated much lower than the other 18 items. It was included to get some ideas of a possible tendency to become more favorable to the social associational reasons for attending college.

The 1968 procedure was to ask students to rate two of the 19 as most important reasons for getting a college education, three in the next most important position, four in the next and finally to indicate which four of the 10 remaining reasons they would regard as least important as they saw the situation now. The scores assigned by the raters were aligned with the original Q-sort scaling and

averaged to provide comparable scores for the two years. To be sure, this presented only an approximation of changes in views held about a college education but it did require rating of the reasons in the context of other considerations, and thus a basis for rating each in importance in relation to others as in the original Q-sort; this procedure, we shall see, demonstrated its special utility in assessing relative changes in views.

Looking first at the estimate of changes in views over the four years by the 85 students, it will be seen in Table 2 that there was a strong inclination to attach increased importance to all reasons for coming to college, all of which were originally rated high also. However, assessment of changes was with reference to each reason, one at a time, a now and then comparison as seen now (1968). The reader will readily detect from Table 2 that it was the occupational and status achievement related reasons that experienced the greatest and most prevalent increase in estimates of importance. The reason clearly in the lead was "providing a secure future for myself and family" with "being able to get a good job" next. "Satisfaction that I can get from actually doing my work" followed in rank order. The importance attached to getting a well-rounded education and life adjustment items "making contacts with important people" and "learning about world affairs" were also upgraded quite consistently but mostly in the "little more now" category.

The town-city boys were quite distinctly more prone to upgrade the occupational reasons for coming to college than the country boys and except for getting a well-rounded education were not much inclined to attach increased importance to other reasons for getting a college education.

On the basis of these findings one could be inclined to conclude that among those considered, the occupationally related ones were upgraded much more than the others, a finding distinctly contrary to expectations. As a student is exposed to a diversity of ideas and views on the college campus as required in the first two years in the College of Agriculture, none of the occupational reasons would be expected to escalate. By comparison the occupational reasons might be expected to recede. Important reasons why this did not occur surely are (1) the impending necessity of finding employment after college and (2) some justification for self-denial in anticipation of the deferred benefits of a college education. Thus, the importance of both surely must have increased the salience of occupational considerations.

On the other hand, results from the Q-sort sample of statements given to students provided reason to question any assumption of increase in importance of occupational over reasons of a more general or social nature. At the same time the results suggested a limitation of Q-methodology for such an evaluation (Cronbach, 1953; Whiting, 1955).

Although procedural conditions in the partial Q-sort administered in 1968 might have resulted in a slight over-estimate of indicated increases in importance attached to reasons for coming to college, decreases in importance assigned to reasons would by the same rated token be an under-estimate. Thus, indicated downgrading of the originally highest occupational reasons would, if anything represent an under-estimate of change while upgrading of other reasons could be partly a function of the method. Subsequent observations will

TABLE 2--PERCENT OF STUDENTS NOT DOING Q-SORT CLASSIFIED BY PRIOR RESIDENCE AND INDICATED CHANGES IN IMPORTANCE ASSIGNED TO REASONS FOR COMING TO COLLEGE

PRIOR RESIDENCE Reasons for Coming to College	TOTAL %	Change in Importance Now Compared to Freshman Year Much less %	A little less %	Couldn't say %	A little more %	Much more %	Not ascertained %
ALL STUDENTS (N=85)							
Occupational-Status Achievement							
Being able to get a good job	100.0	2.4	14.1	8.2	35.3	34.1	5.9
Providing a secure future for myself and family	100.0	0.0	9.4	8.2	29.4	48.3	4.7
Satisfaction I can get in actually doing my work	100.0	0.0	5.9	22.4	41.2	25.8	4.7
Making money	100.0	5.9	17.6	17.6	37.7	16.5	4.7
Moving up in the world	100.0	1.2	14.1	18.8	43.5	16.5	5.9
Humanitarian-Intellectual							
Getting a well-rounded education	100.0	1.2	4.7	11.8	48.2	29.4	4.7
Benefits others may receive from my college education	100.0	0.0	5.9	40.0	36.5	12.9	4.7
Learning for learning's sake	100.0	4.7	12.9	27.1	28.2	22.4	4.7
Life Adjustment							
Making contacts and friends with important people	100.0	1.2	7.1	24.6	40.0	22.4	4.7
Learning about world affairs (economic and social)	100.0	1.2	5.9	23.5	42.3	22.4	4.7
COUNTRY STUDENTS (N=73)							
Occupational-Status Achievement							
Being able to get a good job	100.0	2.7	15.1	6.8	37.1	31.5	6.8
Providing a secure future for myself and family	100.0	0.0	9.6	5.5	32.9	46.5	5.5
Satisfaction I can get in actually doing my work:	100.0	0.0	5.5	21.9	42.4	24.7	5.5
Making money	100.0	6.8	16.4	19.2	35.7	16.4	5.5

TABLE 2--(Continued)
PERCENT OF STUDENTS NOT DOING Q-SORT CLASSIFIED BY PRIOR RESIDENCE AND INDICATED CHANGES IN IMPORTANCE ASSIGNED TO REASONS FOR COMING TO COLLEGE

PRIOR RESIDENCE	TOTAL	Change in Importance Now Compared to Freshman Year					
Reasons for Coming to College		Much less	A little less	Couldn't say	A little more	Much more	Not ascer-tained
	%	%	%	%	%	%	%
ALL STUDENTS (N=85)							
Moving up in the world	100.0	1.4	16.4	17.8	42.5	15.1	6.8
Humanitarian-Intellectual							
Getting a well-rounded education	100.0	1.4	2.7	12.3	47.9	30.2	5.5
Benefits others may receive from my college education	100.0	0.0	5.5	39.7	35.6	13.7	5.5
Learning for learning's sake	100.0	2.7	13.7	26.0	28.8	23.3	5.5
Life Adjustment							
Making contacts and friends with important people	100.0	1.4	8.2	21.9	38.3	24.7	5.5
Learning about world affairs (economic and social)	100.0	0.0	5.5	23.3	43.8	21.9	5.5
TOWN-CITY STUDENTS (N=12)							
Occupational-Status Achievement							
Being able to get a good job	100.0	0.0	8.3	16.7	25.0	500.0	0.0
Providing a secure future for myself and family	100.0	0.0	8.3	25.0	8.3	58.4	0.0
Satisfaction I can get in actually doing my work	100.0	0.0	8.3	25.0	33.3	33.4	0.0
Making money	100.0	0.0	25.0	8.3	50.0	16.7	0.0
Moving up in the world	100.0	0.0	0.0	25.0	50.0	25.0	0.0
Humanitarian-Intellectual							
Getting a well-rounded education	100.0	0.0	16.7	8.3	50.0	25.0	0.0
Benefits others may receive from my college education	100.0	0.0	8.3	41.7	41.7	8.3	0.0
Learning for learning's sake	100.0	16.7	8.3	33.3	25.0	16.7	0.0
Life Adjustment							
Making contacts and friends with important people	100.0	0.0	0.0	41.7	50.0	8.3	0.0
Learning about world affairs (economic and social)	100.0	8.3	8.3	25.0	33.4	25.0	0.0

recognize these limitations. Thus, it was clearly evident from Table 3 that several of the key occupational reasons did recede in importance in relation to others. These were:

I want my University work to relate closely to my vocational goal, i.e., to help me for my future career, and

It takes a college education to get a good job these days.

Actually these were the only reasons out of the total of 19 that showed appreciable decreases. The only other reason to show any decrease at all was the "knowledge is its own reward" idea for coming to college.

Somewhat more cautiously it is noted that reasons which increased most were first an upgrading of the job security reason, particularly by the town-city boys. This was consistent with the previously noted inclination for town-city boys to upgrade occupational reasons relatively more than those from the country over the four year period. However, on the average the two reasons showing distinctly the greatest increase were:

I feel I want to have a purpose in society and that the University will help me gain it, and

I felt that being here will make me a more complete and well-rounded person.

Relative increases for both were greater for country than for town-city boys and in both cases the 1968 ratings were higher for the former than the latter.

There was also a distinct inclination to favor the social aspects of a college education more in 1968 than in 1964 as indicated by an increased emphasis placed on the following:

The social aspects of college are really more important than the grades I receive, and

It is an important part of my objective in coming to the University to learn to get along with other people.

Distinct increases were registered in these reasons by both residential groups.

Changes in Major

Students generally come to a university with limited knowledge about the availability of possible areas of academic specialization and with little appreciation of what many of them may offer. Thus, choice and change of a major is a type of change that would normally be expected as a part of the college experience, although in this case approximately three-fourths came with at least a tentative choice of a major in mind. A firm commitment to a particular major could and probably does minimize exposure to other academic alternatives despite the opportunity offered in the University for a broad coverage in other agriculturally related fields.

The distribution of majors into general categories in 1964 and 1968, as indicated on Table 4, shows that the general areas that gained the most students during the four year period were the social sciences and vocational agriculture. Agricultural production, agricultural sciences, and practicing professions showed smaller gains. The one field which showed a loss of students was veteri-

TABLE 3--IMPORTANCE RATING ASSIGNED DESIGNATED REASONS FOR COMING TO COLLEGE IN 1964 Q-SORT AND 1968 IMPROVISION BY COLLEGE OF AGRICULTURE STUDENT PANEL CLASSIFIED BY PRIOR RESIDENCE

REASONS FOR COMING TO COLLEGE	Prior Residence					
	All Students		Country		Town-City	
	1964 (average)* (N=60)	1968 (average) (N=60)	1964 (average) (N=45)	1968 (average) (N=45)	1964 (average) (N=15)	1968 (average) (N=15)
OCCUPATIONAL - STATUS ACHIEVEMENT						
You just can't get along without money these days. That's one thing I had in mind.	7.2	7.3	7.1	7.2	7.3	7.5
It takes a college education to get a job these days.	8.4	7.7	8.3	7.6	8.4	8.3
Above all what the University will do is provide me with a stable secure future.	7.6	7.8	7.7	7.7	7.5	8.1
I want my University work to relate closely to my vocational goal, i.e., to help me for my future career.	9.2	8.7	9.1	8.6	9.6	8.9
These days you have to look out for yourself. I thought getting a good education would be a good way to do it.	7.0	7.4	6.9	7.4	7.2	7.4
Everyone ought to try to move up in the world. You sure can't do this without a college education.	7.3	7.6	7.3	7.7	7.3	7.3
HUMANITARIAN - INTELLECTUAL						
I feel that I want to have a purpose in society and that the University will help me to gain it.	7.4	8.4	7.4	8.5	7.4	8.1
Somebody ought to be thinking about the other fellow these days. I want my life to count something for other people.	6.6	7.2	6.6	7.2	6.7	7.1
Knowledge is its own reward. That's mainly why I'm here.	7.6	7.4	7.6	7.4	7.6	7.5
I felt that being here will make me a more complete and well-rounded person.	7.7	8.6	7.8	8.7	7.4	8.1

TABLE 3 (Continued)--IMPORTANCE RATING ASSIGNED DESIGNATED REASONS FOR COMING TO COLLEGE IN 1964 Q-SORT AND 1968 IMPROVISION BY COLLEGE OF AGRICULTURE STUDENT PANEL CLASSIFIED BY PRIOR RESIDENCE

REASONS FOR COMING TO COLLEGE	Prior Residence					
	All Students		Country		Town-City	
	1964 (average)* (N=60)	1968 (average) (N=60)	1964 (average) (N=45)	1968 (average) (N=45)	1964 (average) (N=15)	1968 (average) (N=15)
I'm not out to change the world or other people. I want to get along with them and get ahead.	7.3	7.5	7.3	7.5	7.3	7.6
I like the idea of being away from home at the University. I have to handle my own affairs and I like this.	6.8	7.4	6.5	7.3	7.4	7.4
UNIVERSITY QUALITIES AND OTHER						
The University has better professors than smaller colleges. I expect better training here.	7.6	7.8	7.6	8.0	7.6	7.2
The University has a high academic reputation; that's why I came here.	7.1	7.6	7.0	7.6	7.3	7.3
My parents (or brothers and sisters) encouraged me to come and did what they could to help me.	7.5	7.6	7.7	7.6	6.8	7.7
I thought college life would be a new and exciting experience.	6.8	7.0	6.6	7.0	7.3	7.1
LIFE ADJUSTMENT						
College allows you to gain more independence without being thrown completely on your own.	6.8	7.3	6.7	7.2	6.8	7.5
The social aspects of college are really more important than the grades I receive.	6.1	6.8	6.0	6.7	6.1	7.1
It is an important part of my objective in coming to the University to learn to get along with other people.	7.3	8.0	7.3	8.0	7.3	7.9

*Possible range for averages is 1-11.

TABLE 4--PERCENT OF COLLEGE OF AGRICULTURE STUDENT PANEL CLASSIFIED BY PRIOR RESIDENCE AND BY AREA OF ACADEMIC MAJOR IN 1964 AND 1968

AREA OF ACADEMIC MAJOR	Prior Residence					
	All students % (N = 145)		Country students % (N = 118)		Town-City students % (N = 27)	
	1964	1968	1964	1968	1964	1968
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0
Agricultural products	24.1	28.4	25.5	33.1	18.5	7.4
Agricultural sciences	2.1	3.4	.8	3.4	7.4	3.7
Social sciences	6.9	26.2	7.6	24.6	3.7	33.3
Veterinary medicine	26.9	12.4	18.6	9.3	63.0	25.9
Vocational agriculture	8.3	17.2	9.3	18.6	3.7	11.1
Other practicing profession	7.6	12.4	9.3	11.0	0.0	18.6
No decision	24.1	0.0	28.9	0.0	3.7	0.0

nary medicine, the proportion selecting it in 1968 being less than one-half that of 1964.

About two-thirds expressed satisfaction with their present majors and slightly over one-fifth thought that maybe they would be satisfied. This was in contrast to approximately 12 percent who indicated that they were not satisfied. In order to get some assessment of reasons and/or influences which operated in decisions about the choice of a major, each student was asked to indicate how important they regarded each of 12 specified reasons or influences on a four category gradient plus an additional request to indicate which of the 12 they regarded as most and second most important. Thus, a six point importance scale for each of the items was provided. These reasons could be regarded as falling generally into three categories, namely (1) pre-college, (2) direct effects of the college experience, and (3) maturation considerations.

Choice of a college major is one of the important decisions that a student has to make, one that has considerable consequences on the way he will be spending his time for many years to come. Thus, it would be hoped that these decisions would be based on a careful assessment of interests, attitudes and needs; circumstances clearly relevant to one's own personal situation; and the projected consequences of the anticipated course of action to self and significant others; and on the contrary, that the influence of peers and perhaps even parents and teachers would be incidental.

Ideally counselors should perform their role in such a way that students understand their interests, attitudes, and needs in relation to their own goals, and projected consequences of alternative courses of action. With this effectively done, a student should have little feeling of recognition and influence of counselors or personal referents.

The manner in which the students assigned the importance ratings to the various influences enumerated in Figure 13 suggests that content and consequence considerations were central and that people may have been helpers at best. It will be seen from Fig. 14 that the item or influence getting by far the most "most importance" ratings was "own interests," itself the product of maturation. The "ability to do good work in the field," was second. What the student alleged he had learned before coming to the University was also rated quite high as a decisional influence.

If we turn to the college experiences, it was again content or "content shapers" that were central; namely (1) college courses, and (2) what I learned after coming here.

Except in a relatively few cases (and ideally there should be many who didn't need help), college advisers and particularly the centrally located ones in the dean's office, were rated even lower, with friends being of almost no importance. Of those involving personal influence, parents headed the list, no doubt figuring more in the decisions of students who had already made up their minds when they came to college than those who had decided on a major after enrolling.

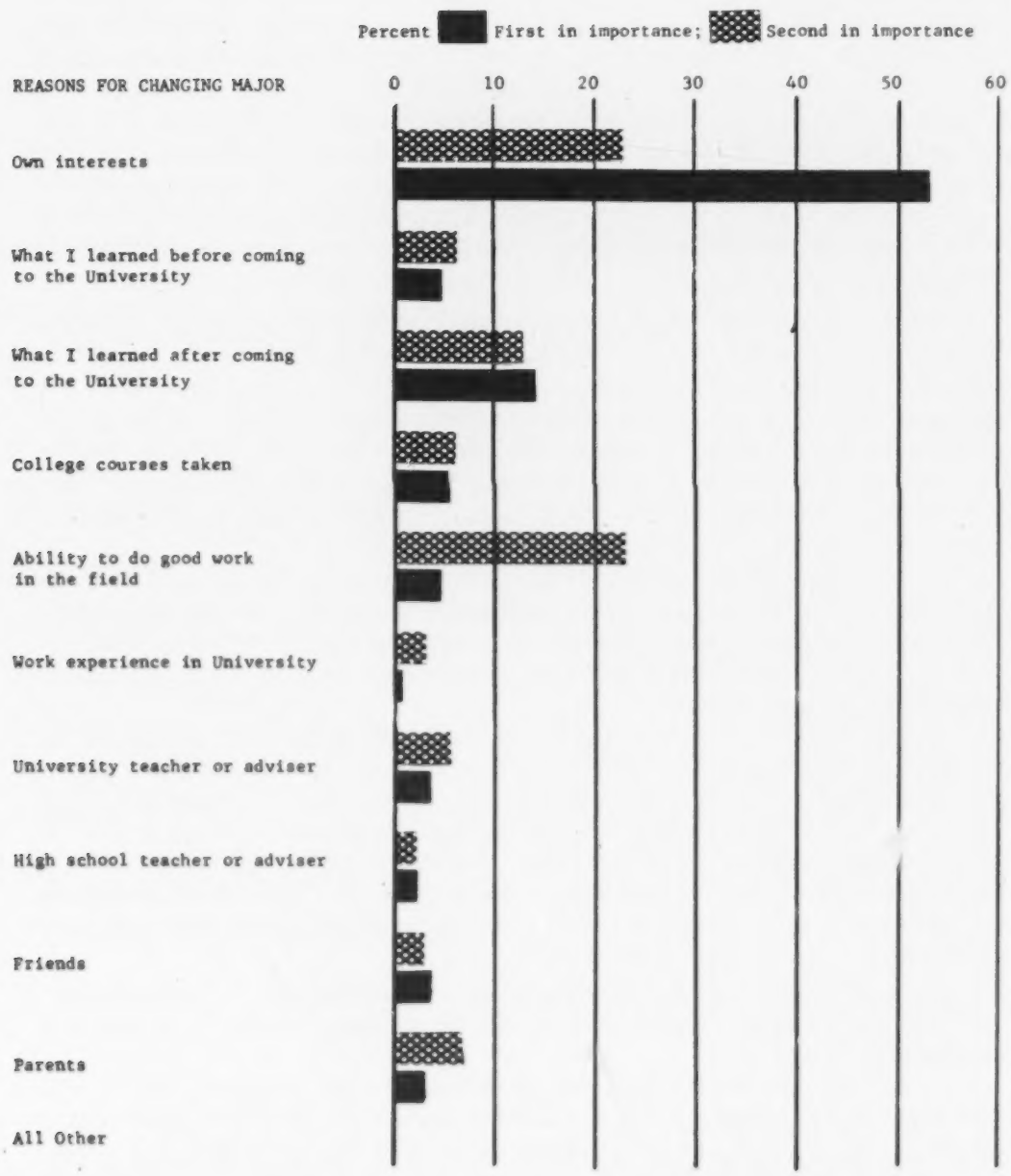

FIG. 14 - Proportions of students in College of Agriculture student panel who indicated designated reasons for choosing their academic major.

Thus, certainly what a student thought he had learned or knew rated well above persons as decision influencers, including counselors and teachers. This suggests a mature realism in arriving at decisions about majors. Any further pursuit of quality considerations would require more intimate knowledge of the influences and processes operating in student decisions judged in some kind of a rationality framework, all considerations quite beyond the scope of this study.

Changes in Occupational Orientations

With occupation as a prime reason for college attendance, it would seem likely that occupational matters would continue to be a major formative influence in shaping the college program while at the same time being influenced by the college experience itself; thus the choice of an occupation and occupational expectations. These areas of change plus a comprehensive look at the comparative characteristics, background, and college experiences of Changers, Non-changers, and Deciders (those who decided on an occupation after entering college) are examined in the section which follows.

The occupational choice. Occupational choice not being a matter for immediate concern for entering freshmen, choice may be expected to range from none at any level of generality to a choice of a specific job in a particular place with a particular person or company, e.g., back to the father's farm or business. The proportion having made a choice at any given point in time would thus be partly a function of the level of generality specified in the question asked. Questions were: "What was your career preference when you entered college?" and "What is your career preference now?" Students were also asked in 1968 what their career decisions were when they completed questionnaires in 1964 using comparable inquiries. It was upon the questions at this level of generality that students were classified as "decided and undecided" in 1964 and as Non-changers, Changers, and Deciders in 1968.

Thus, it was determined that 53.8 percent of the students had a general career preference area in mind when entering college as freshmen with the town-city group much higher than the country; 77.8 percent and 48.3 percent, respectively. From this it might be surmised that the prior experience and background of the former was much more conducive to a career area choice than the background of the country youth; an alternative hypothesis would be that the occupationally oriented students from the town-city environment disproportionately elected to enter the College of Agriculture.

We have already observed that having an occupational choice at this specified level of generality was not a factor in whether a student stayed in school or not, a finding somewhat at variance with the belief that a person ought to know what he is going to do "before going to college" or that he ought to "try to get a job" instead.

Over half of the country youth made an occupational choice while in college compared to 22.2 percent of the town-city. In marked contrast 37.0 percent of the latter and 21.2 percent of the former switched from one occupational area to another. Thus, three out of four of the farm boys and almost 60 percent of the

town-city either made up their minds after coming to the university or changed occupational areas at least once; some 16 percent of the farm and 18.5 percent of the town-city had changed their minds two or more times. Some changes were of such magnitude as to require a change from one departmental major to another. Only two country boys had given up their 1964 choice and had not decided on an occupation at the time they completed the questionnaires in 1968.

Some idea as to how occupational choice areas changed over the five year period may be obtained by observing the distribution of responses reported in Table 5. Thus, in the aggregate, students selected professions related to agriculture and those of a non-agricultural nature in greatest proportion in both years with an inclination to switch to the quite distinctly agricultural professions and away from the non-agricultural during the four years. Included in the former were such occupations as dairy manufacturing, dairy marketing, vocational agriculture teacher, agricultural journalism; in the latter, professions including lawyer, sociologist, psychologist, Air Force pilot, university teachers, and others.

It will be further noted that there was a considerable decrease in the proportion of students who expected to farm as they progressed through college. Perhaps the most marked change was the very distinct increase in the percent who expected to go into business and sales work. As might be expected, there was an inclination for the town-city youth to select professions peripherally related to agriculture in contrast to the open country students who were more inclined to choose the professions directly related to agriculture. Also as conditioned by both inclination and opportunity, the proportion of the country boys expecting to farm was much higher than the town-city.

Most changes in occupational choices during college were made during the sophomore or junior year, at a time when enough experience had accumulated to provide a substantially greater knowledge base than at the time of entry into college for arriving at an occupational decision but sufficiently early to permit taking the necessary course work to support the specialization choice (See Table 6). However, even with three-fourths of the country and 60 percent of the town-city boys either deciding on or changing an occupational choice area, plus roughly one out of six who changed two or more times over the four year period, nearly half said that they still would consider other alternatives or actually would prefer another occupational area than the one they had selected.

The inner direction of influence and the conditioning effect of the college experience was indicated by the distinct majority who said consideration of their own interests or abilities or college courses taken were influences that first started them to make their last change in occupational choice. Both personal influences (parents, friends, and teachers) and academic difficulties were mentioned by comparatively few as initial reasons for considering a change in occupational choice, thus again suggesting an inner direction and hopefully a considerable measure of rationality in arriving at occupational decisions.

Another question investigated was the perception of students about possible sources from which they could get information and advice in choosing an occupation. Gottlieb says this is likely to be a function of (1) how capable an individual thinks a source is to supply needed information and advice and (2)

TABLE 5--PERCENT OF COLLEGE OF AGRICULTURE PANEL OF STUDENTS INDICATING DESIGNATED CAREER PREFERENCES 1964-1968 CLASSIFIED BY PRIOR RESIDENCE

CAREER PREFERENCES	Total		Prior Residence			
			Country		Town-City	
	1964 % (N=145)	1968 % (N=145)	1964 % (N=118)	1968 % (N=118)	1964 % (N=27)	1968 % (N=27)
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0
No preference stated	15.9	0.0	18.6	0.0	3.7	0.0
Professional agricultural	16.6	24.8	17.8	26.3	11.1	18.5
Professional non-agricultural	35.6	27.6	27.1	23.7	74.1	44.4
Business and sales	7.6	26.9	8.5	26.3	3.7	29.6
Farmer	24.3	18.6	28.0	21.2	7.4	7.4
Other	0.0	.7	0.0	.9	0.0	0.0
Unkown	0.0	1.4	0.0	1.7	0.0	0.0

TABLE 6--PERCENT OF COLLEGE OF AGRICULTURE STUDENT PANEL CLASSIFIED BY TIME OF LAST CHANGE IN CAREER CHOICE AND PRIOR RESIDENCE

TIME OF LAST CAREER CHANGE OR DECISION	Total % (N = 145)	Prior Residence: Country % (N = 118)	Prior Residence: Town-City % (N = 27)
TOTAL	100.0	100.0	100.0
Before college	38.7	38.1	40.8
Freshman year	9.0	9.3	7.4
Sophomore year	21.3	22.0	18.5
Junior year	18.6	18.7	18.5
Senior year	11.0	10.2	14.8
Time not determined	1.4	1.7	0.0

how willing he perceives the source to give this kind of assistance (Gottlieb, 1965). From the standpoint of perceived capability, university advisers and teachers stood very high on the list with someone on the job in a generally lower but still high position (See Fig. 15). Friends, wives, girl-friends, and fraternity brothers were seen as having very limited utility judging from the percentage who indicated that they regarded them as very capable.

The biggest discrepancy between perceived willingness and perceived capability was for wives and girl-friends who were seen as very high in willingness but low in capability. Parents were regarded as most often very willing to render assistance. Generally speaking, university teachers and advisers were seen as less willing than capable. The one exception was personnel in the dean's office who were seen as very capable and very willing by approximately 30.0 percent of the students. This placed them in a moderately important position on both counts, when compared to others who were willing and/or capable. Company representatives, like best friends, were more frequently seen as very willing than very capable, while the opposite was true for people on the job.

Country, town-city differences were most noted in a much higher percentage of the latter than the former regarding parents and people on the job as very capable of giving information and advice. Also in regard to willingness, many more of the town-city than the country students saw their parents and someone on the job as being very willing to render help in occupational decisions.

Idealized view of an occupation. A second kind of occupationally related consequence of a college education considered in this study was what we refer to as idealized view of an occupation or more specifically what the boys were inclined to emphasize as being of high order importance in an occupation which they would choose for themselves. Four views were abstracted from a six point range of importance assigned to a list of 23 occupational attributes by high school seniors in a recent Missouri study (Gregory and Lionberger, 1968). These were materialistic-doer, extrinsic reward, management-creativity, and personality fulfillment. The last were very closely related and may be regarded

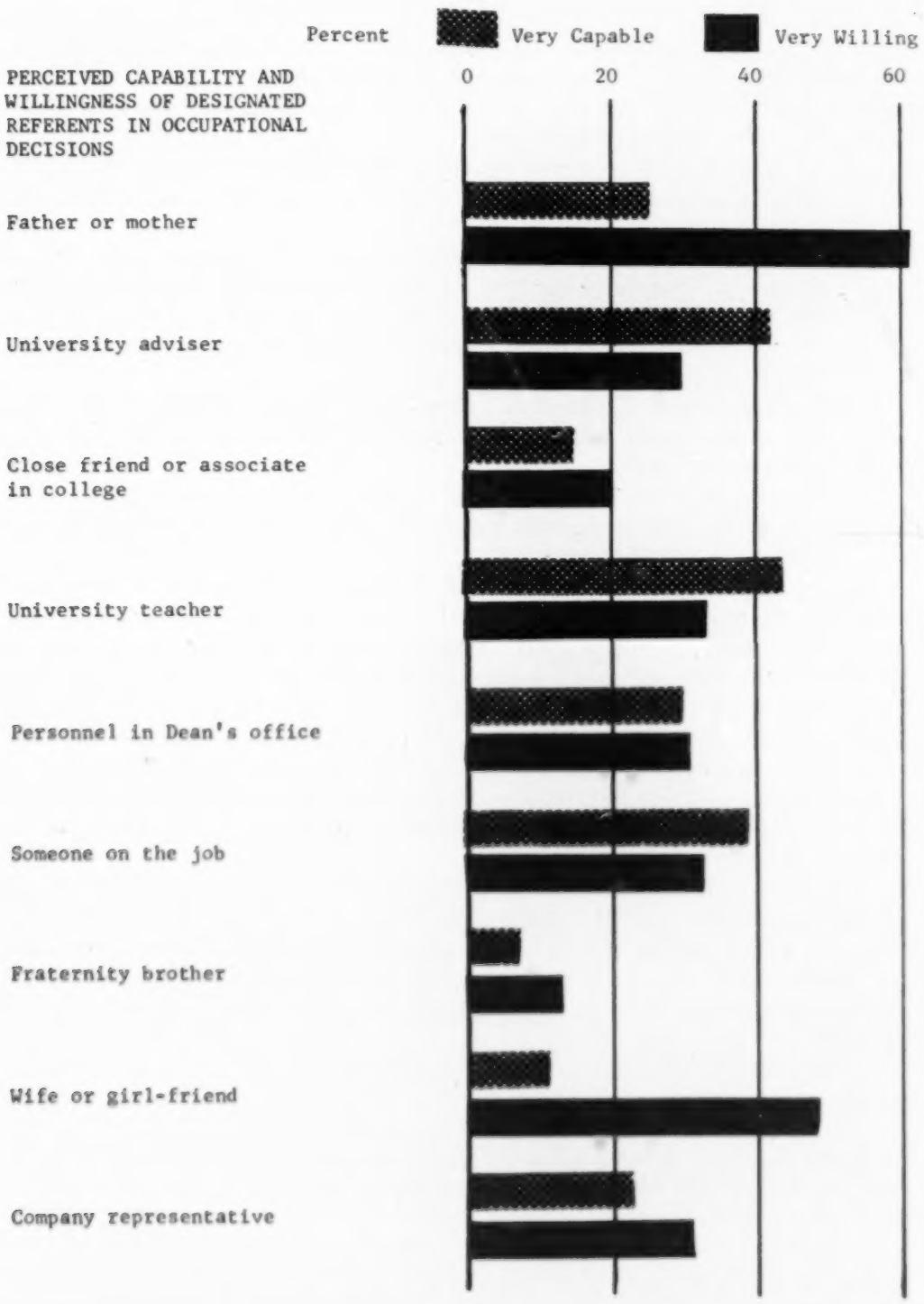

FIG. 15 - Proportions of students in College of Agriculture student panel who perceived different referents as "very capable" or "very willing" to help in occupational decisions.

merely as part of a more comprehensive view referred to as intrinsic reward. This carries the connotation that occupation is seen as a means of self-expression and satisfaction to be derived from participating in the occupational activity itself. Eighteen near identical attributes were used to define these views among the college students, as follows:

1. Materialistic-Doer—work requiring much physical activity, work out-of-doors, working with things, work involving much use of tools and machines.
2. Management-Creativity—work that requires managing of and responsibility for people, work that requires management and responsibility for money, people with whom one would associate, selling ideas or things, working with people, work that requires considerable thought and development of ideas.
3. Extrinsic Reward—good retirement plan, good beginning pay, chance for advancement, being able to keep the job as long as desired, jobs available in the field.
4. Personality Fulfillment—service to humanity, how interests and abilities fit in, how important people feel the occupation is, people with whom one would associate.

It will be observed from Fig. 16 that the two most dominant views in 1964 were extrinsic reward, mainly concerned with what an occupation can offer in terms of pay, security, and a good retirement plan, and personality fulfillment, concerned with how one's own interests and abilities fit in and the people with whom one would be associated. It will be seen that the first mentioned view remained about constant over the four year period except for a slight decrease for the town-city boys. On the other hand, the personality fulfillment view increased appreciably for the country boys and the management-creativity view for both. The latter emphasized work requiring responsibility for people and or money and thought about new ideas.

The materialistic-doer view, elsewhere shown to be more prevalent among agriculture college students than other freshmen students in the university (Gregory and Lionberger, 1967), decreased very considerably and was more prevalent in both years in the thinking of country than town-city boys. This view emphasized physical activity, working with things over people, and working out of doors.

Thus, the college experience was associated with and presumably was instrumental in causing more importance to be attached to the qualities of an occupation that permit a person to derive satisfaction by participation in the work activity itself; this notwithstanding the continued relatively high rating of good beginning pay, security, and retirement which compose the extrinsic reward view of an occupation.

Interests. One of the ingredients in successful adjustment to an occupation is interest, itself a product of maturation processes occurring in all developmental experiences. In order to assess the extent and nature of interest changes, all Freshmen were administered the Strong Vocational Interest Blank (SVIB) in 1964; 114 were again given the inventory in 1968. Examination of the nature

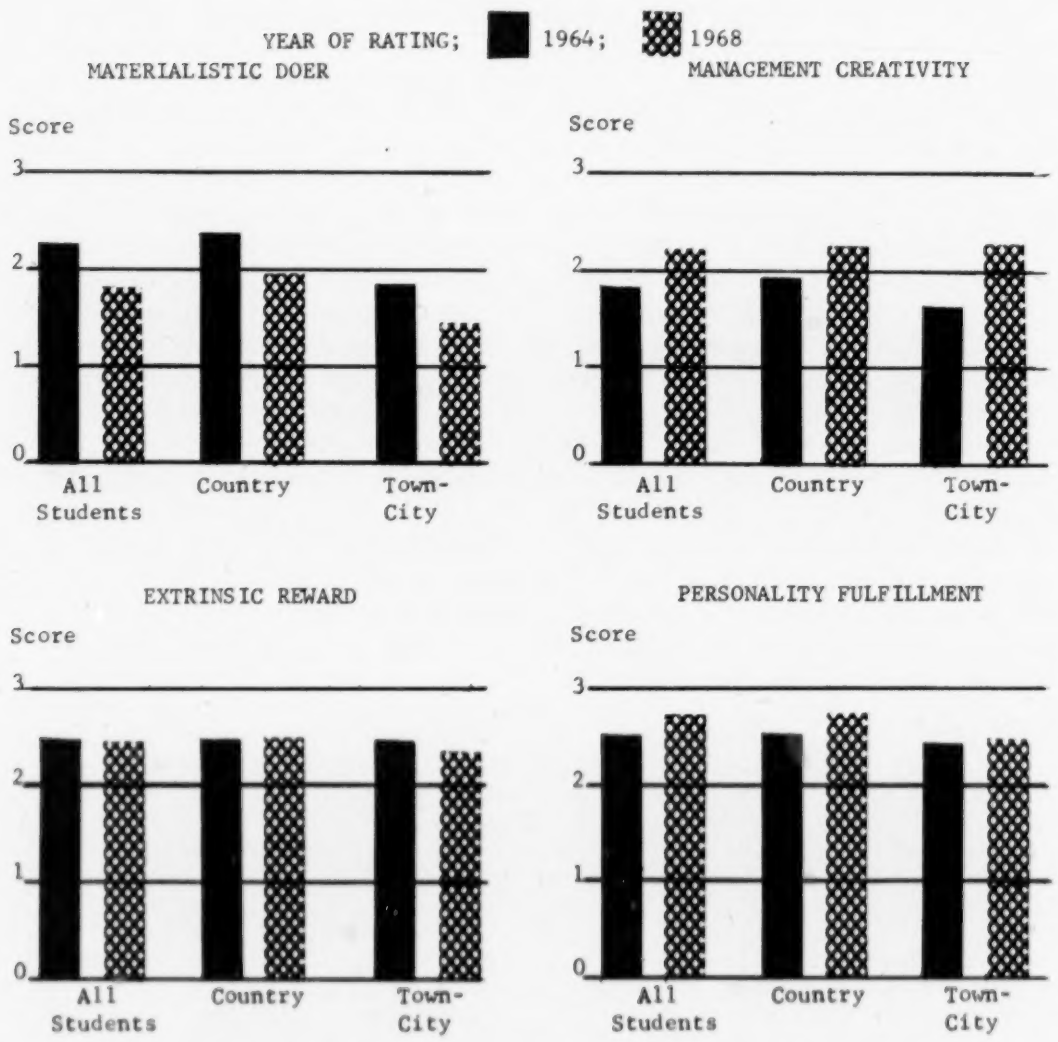

FIG. 16 - Idealized view of occupation scores of country and town-city students in College of Agriculture student panel.

and distribution of the cases lost in the test—retest situation, observed from the standpoint of departmental majors and original interest patterns, gave no reason to believe that those omitted were appreciably different from those who took the inventory both times. Scoring for specific occupations was done on a basis regarded as comparable for the two years despite changes made in the item content of the inventory during the interim period.[4]

4 The 1964 SVIB profile sheets were re-scored by the Center for Interest Measurement Research, Minneapolis, Minnesota, reflecting changed item weights of the revised SVIB and making possible direct comparisons between 1964 and 1968 profile sheets.

Norms for inventory scores were stated in terms of a zero to 65 scale in relation to the interests possessed by those successfully employed in the respective occupations. Occupational scale scores in the range designated as B+ or A in the inventory were regarded as being of sufficient magnitude to permit successful adjustment to the occupation insofar as interests were concerned.

Processes of interest formation involve both development and stabilization of interests, the former and perhaps the latter being dependent on diverse and meaningful experiences in relation to the occupational world. In terms of prior residence, the town-city environment might seem to be more conducive to the development of occupational interests. Although this seemed evident, since substantially more of the town-city students had made an occupational choice at college entry, in the matter of measured interests on the SVIB the differences were very small in the mean number of high ranking scales held by each of these prior residence groups; country students had only slightly more A and B+ scales than town-city youth. Also a few more of the latter had no primary interest patterns.

As will be noted later, having a vocational decision seemed to have a stronger relationship to more highly developed and differentiated interests than did prior residence per se. However, somewhat greater stability in the town-city group was suggested by the distinctly larger percent showing no change in the number of A and B areas (See Table 7).

TABLE 7--PERCENT OF COLLEGE OR AGRICULTURE STUDENT PANEL CLASSIFIED BY PRIOR RESIDENCE AND CHANGE IN NUMBER OF B+ AND A SCALES ON SVIB 1964-68

CHANGE IN NUMBER OF B+ AND A INTEREST SCALES ON SVIB 1964-68	TOTAL % (N=114)	Prior Residence: Country % (N=94)	Prior Residence: Town-City % (N=20)
	100.0	100.0	100.0
TOTAL			
Increased 6 or more	9.6	8.5	15.0
4-6 more	13.2	14.9	5.0
1-3 more	25.4	26.6	20.0
No change	9.6	7.5	20.0
Decreased 1-3	31.6	32.9	25.0
4-6 fewer	8.8	7.5	15.0
More than 6 fewer	1.8	2.1	0.0
Unknown	0.0	0.0	0.0

As maturation continues it would be hoped that congruity of occupational choice and occupational interests would increase. Approximately 63 percent of the students who expressed an occupational choice in 1964 showed a drop in

rank order of the scale (or scales) corresponding to this choice, a proportion somewhat larger than expected, since only one-half of these changed choices.

Even with choice duplications retained for 27 percent of the entire panel, the rank order salience of occupational interests did improve in regard to the 1968 choice in comparison to the 1964, but certainly not to the extent that may be anticipated. Actually the percent experiencing a rank order increase in occupational interest salience in the 1968 choice was 42.1, a little less than the 43.8 percent who experienced a decline in the rank order measured interest for the 1968 occupational choice. The relationship of measured interest to occupational choice will be a consideration in a later section.

Specific occupational interest areas were distributed over approximately 30 occupations in 1964 with percents exceeding 10 in only two cases, namely, 12.3 for veterinarian and 40.1 for the occupation of farming. Both decreased appreciably in first order importance by 1968 with primary interest patterns in these occupational areas indicated in only 6.1 percent and 19.3 percent of the cases, respectively, Thus, the college experience seemed to dampen the interests which students had in common with those engaged in these two occupations.

Thinking in terms of broader categories, it may be seen from Table 8 that the technical supervision along with business and accounting areas were big gainers in the development of primary interest patterns, with social services and sales next highest. The technical and skilled trades area showed the greatest loss; aesthetic-cultural, small to begin with, was a moderate loser. Interest in the science oriented occupations as indicated by the percentage of primary interest patterns in these areas decreased from 16.2 percent in 1964 to only 12.1 percent in 1968.

CHANGES IN OCCUPATIONAL ORIENTATIONS AND COMMITMENTS

Priority of Occupational Choice

Of all changes occurring in students throughout the college experience those related to occupational choice and commitment were a prime concern and were accordingly singled out for special treatment in this study. Research has repeatedly shown that occupational objectives are the primary concern of most freshman students for getting a college education. In this society, all youth are expected to choose an occupation that they expect to pursue, and for college students certainly by the time of the senior year if not by the time of entry. Occupation is a central consideration in one's concept of self, one's own self-esteem, and is a key determinant of an individual's socio-economic status and life chances. With a college education providing the only means of access to some of the cherished goals set by self, it would hardly seem that any reasonably rational student could ignore the fundamental truths or the consequences of the occupational choice.

Within this choice context there is still much room for variation in idealized views held of an occupation, what one would hope to derive from the occupational experience itself, and from the extrinsic benefits of such employment. With decisions about an occupation essentially a developmental process begin-

ning in very early childhood and perhaps ending only with death, a vast gamut of considerations are necessary to explain the status of a choice and views at any given point in time. For this, consideration must be given to both background and college experience of which only selected aspects can be considered in this study, all of which must be thought of in an interactional framework. Thus, what a person is or thinks at any given point in time is a product of the combined influence of original nature and experiences to that point in time with self quite circumscribed as a selecting agent in the experiences to which he may be exposed (Robbins, 1953). Background factors which have quite consistently been associated are town-country residence and the general cultural area from which a person comes plus, of course, many family factors. For this reason students were divided into open country and town-city groups and the social area of prior residence. These, as well as such factors as socio-economic status of the parents, their psychological and financial support of the student in college attendance, and the student's birth order in the family were selected as appropriate independent variables. With possible jobs from which to choose numbering in the thousands and occupational areas easily within the hundreds, it could hardly be expected that a student by college age could be very well acquainted with the fields of possible choice or that interest patterns would be very well stabilized.

The college experience with all it offers would surely be expected to contribute to the maturation-developmental process in regard to the work world. Knowledge of what is possible, what an occupation can provide through actual participation in the work activity, and interests centering around an occupation all can be expected to change. All of these plus certain views about the value of a college education can be expected to operate as intervening variables in what a student finally decides to do occupationally. In a real sense, changes are likely to be the product of the college experience in the broadest sense, particularly since the college experience is the central focus and prime regulator of life activities of the student during the college years. To be sure other influences cannot be ruled out but the college experience is likely to be central.

In addition to the effects of college on intervening influences, there are those of a more direct nature. These include courses taken while in college, interaction with teachers and counselors, selective association with peers under a variety of circumstances, and work experiences while in college. All of these have been included in the interactional milieu considered as an explanation of how students progress through thought processes in arriving at occupational choices and commitments.

The Occupational Choice

Occupational choice or commitment at any given point in time ranges from inclinations slightly favoring one alternative over known others to a firm belief that the occupational choice is the one best for self, coupled with varying degrees of intent to follow the chosen occupational alternative. Choices and commitment with supporting interest and idealized views develop and change with time and experience. Truly this is all a part of the maturation-socializing proc-

TABLE 8--PERCENT OF PRIMARY INTEREST PATTERNS FOR COLLEGE OF AGRICULTURE STUDENT PANEL CLASSIFIED BY PRIOR RESIDENCE AND BY OCCUPATIONAL GROUPING ON SVIB

	Prior Residence					
	All students		Country students		Town-City students	
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0
Biological science	13.1	10.0	11.8	9.4	20.0	13.0
Physical sciences	3.1	2.1	2.7	2.6	5.0	0.0
Technical supervision	9.2	15.0	9.1	14.5	10.0	17.4
Technical and skilled trades	32.4	17.1	34.6	17.9	20.0	13.0
Social service	2.3	6.4	2.7	6.0	0.0	8.8
Aesthetic-cultural	9.2	5.7	6.4	5.1	25.0	8.8
Business and accounting	12.3	17.9	13.6	18.9	5.0	13.0
Sales	13.8	17.9	14.6	17.1	10.0	21.7
Verbal-linguistic	4.6	7.9	4.5	8.5	5.0	4.3

esses of life in a society where individual choice is expected and indeed required of those who want to be regarded as normal functioning members of the society.

Needless to say, the kind of response and the proportion giving affirmative answers to any occupational choice questions are partially a function of the way the question is asked. In this case, students were questioned as freshmen and again four years later. Responses were regarded as comparable bases upon which to make comparisons of the status of occupational choice at the two points in time, quite obviously relating to occupational areas, not particular positions chosen. The choice of an actual position was not at issue, certainly for the freshmen students, and in most cases likewise for the students interviewed four years later. It is upon this basis that students were divided into Non-changers, Changers, and Deciders for analytical purposes in this section.

The rationale in the use of such a division was that the decisional processes involved in each case were the product of identifiable differences in the background and the experiences of the student while in college. For those who came decided and left with the same decision one would expect a heavy conditioning influence of experience prior to college attendance and essentially reinforcement of a position already taken while in college. For Changers, all of whom came with an original choice which they later changed, the college experience surely operated in a different manner; and finally those who came undecided but ended with an occupational choice necessarily responded differently to the college experience than the other two groups. These in essence are general hypotheses upon which subsequent analyses reported in this bulletin are based.

On the basis of questions asked about the occupational choices at two points in time, it was found in 1968 that 26.9 percent of the 1964 freshmen still in college at the University of Missouri came with occupational choices which they did not change over the interim period; 26.9 percent did change their original choice; and the remaining 46.2 percent made up their minds at least tentatively at some time during their four years at the university. The proportions choosing specific kinds of occupations are indicated in Table 9.

Areas which showed the greatest gains in proportion of choices were social service, sales, business, and social sciences, in that order. Farming showed somewhat of a more moderate gain despite a decline in the measured sciences supporting interests. Only the general professions, which included occupations such as lawyer, journalist, college professor, veterinarian, entomologist, and others, showed a loss. This occurred in spite of the fact that almost 12 percent of the Deciders chose the general professions. The loss was due to changes in occupational choices made by the Changers.

It was expected that most of the decisions and changes in choice would occur before the end of the sophomore year. This was true to a certain extent, but there were more decisions during the junior and senior years than expected (Table 10). By the end of the sophomore year 38.5 percent of the Changers had already made their change; 23.1 percent did not do so until after the junior year. Choices made by Deciders were distributed throughout the four years.

Decisions seemed to be made essentially on such quality content considerations as course work, interests, abilities, attitude change, and employment expe-

TABLE 9--PERCENT OF COLLEGE OF AGRICULTURE STUDENT PANEL CLASSIFIED BY STATUS OF OCCUPATIONAL CHOICE AND BY NATURE OF OCCUPATIONAL CHOICE 1964-68

NATURE OF OCCUPATIONAL CHOICE 1964-68	Status of Occupational Choice (1964-68)							
	All students % (N = 145)		Non-changers % (N = 39)		Changers % (N = 39)		Deciders % (N = 67)	
	1964	1968	1964	1968	1964	1968	1964	1968
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Undecided yet	46.2	1.4	0.0	0.0	0.0	5.1	100.0	0.0
General professional	27.5	26.1	46.2	46.2	56.4	30.8	0.0	11.9
Biological sciences	1.4	2.1	0.0	0.0	5.1	0.0	0.0	4.5
Physical sciences	0.0	1.4	0.0	0.0	0.0	2.6	0.0	1.5
Social sciences	0.7	8.3	0.0	0.0	2.6	5.1	0.0	14.9
Social service	7.6	19.3	20.5	20.5	7.7	15.4	0.0	20.9
Business	2.1	11.0	5.1	5.1	2.6	15.4	0.0	11.9
Sales	0.0	9.7	0.0	0.0	0.0	17.9	0.0	10.5
Farming	14.5	19.3	28.2	28.2	25.6	7.7	0.0	20.9
Other	0.0	1.4	0.0	0.0	0.0	0.0	0.0	3.0

TABLE 10--PERCENT OF COLLEGE OF AGRICULTURE STUDENT PANEL CLASSIFIED BY STATUS OF OCCUPATIONAL CHOICE AND BY TIME OF MOST RECENT CHANGE OR DECISION OF OCCUPATION

TIME OF MOST RECENT CHANGE OR DECISION OF OCCUPATION	Status of Occupational Choice 1964-68)			
	Total % (N = 128)	Non-changers % (N = 39)	Changers % (N = 39)	Deciders % (N = 50)*
TOTAL	100.0	100.0	100.0	100.0
Freshman year	7.0	2.6	7.7	10.0
Sophomore year	23.4	2.6	30.7	34.0
Junior year	20.3	0.0	25.6	32.0
Senior year	17.2	5.2	23.1	22.0
Not ascertained	1.6	0.0	2.6	2.0
Not applicable or unknown	30.5	89.6	10.3	0.0

*Number from whom usable responses were obtained.

rience. Personal influence of friends, family, and teachers was infrequently mentioned (Table 11). This suggests that these decisions were part of a maturation process where in developing personal capabilities, interests, and new experiences and attitudes provided the basis upon which choices were made, all likely a part of the college socialization experience to which they were exposed.

Non-changers were expected to express more satisfaction with their choices, having retained them over a longer period of time. This was the case, as 71.8 percent stated they preferred their choices to all others. Changers and Deciders, who decided later, displayed somewhat more ambivalence; 48.7 percent and 49.3 percent, respectively, indicated they would consider other alternatives, but only about seven percent of each thought they would actually prefer some other occupation.

A somewhat stronger satisfaction with choices may be inferred upon examining jobs which graduates accepted. Although the proportion who took jobs was much smaller than expected, considerable congruity between jobs taken and 1968 expressed choices was observed. Almost 91 percent of the Non-changers who accepted jobs did so in the precise field they had chosen. Proportions for Changers and Deciders were 70 percent and 76.2 percent, respectively.

TABLE 11--PERCENT OF COLLEGE OF AGRICULTURE STUDENT PANEL WHO CHANGED VOCATIONAL PLANS CLASSIFIED BY STATUS OF OCCUPATIONAL CHOICE AND BY INFLUENCE FIRST PRECIPITATING MOST RECENT CHANGE OF VOCATIONAL PLANS

INFLUENCE FIRST PRECIPITATING MOST RECENT CHANGE OF VOCATIONAL PLANS	Status of Occupational Choice (1964-68) Total % (N = 106)	Changers % (N = 39)	Deciders % (N = 67)
TOTAL	100.0	100.0	100.0
Not applicable	21.7	10.3	28.3
Friends - personal	1.9	2.6	1.5
Persons in the field	2.8	0.0	4.5
Family relationships	0.9	2.6	0.0
Teacher(s) or adviser(s)	0.9	0.0	1.5
Course work	17.0	25.5	11.9
Academic difficulties	8.5	12.8	6.0
Interests, abilities and attitude change	20.8	15.4	23.9
Employment on job; experience	6.6	12.8	3.0
Knowledge of job opportunities	3.8	2.6	4.5
Not ascertained	4.7	7.7	11.9
Other	10.4	7.7	3.0

The Influence of Background Factors.

These are what the student experienced before coming to college and as indicated are by no means all-inclusive. The background factors included in this study, as has been seen, are open country—town-city and social areas of residence plus selected family background factors. Analyses are actually confined to testing of relationships between choice or no choice of an occupation by the freshmen year and each of the factors, always with town-country residents controlled. For it is on this factor and on relevant intervening variables that most differences in choice tended to occur. Although association of the variables actually tell us nothing as to cause, the authors are inclined to assume influence on the basis of knowledge of how socializing processes operate in shaping the lives of individuals.

Place of residence. Opportunity for exposure to knowledge about different work roles is surely greater in the urban than the farm open country environment; also some farm boys have an opportunity and actually do weigh the alternatives and perhaps are encouraged to do so by the parents. So long as this continues as an alternative, a farm boy may continue to be in a state of relative indecision. With both factors considered it was expected that more town-city than open country youth would have made at least a tentative occupational choice by the time they had entered college; thus it was that 77.8 percent and 48.3 percent respectively had made a tentative choice. It was further expected that the town-country youth would also be slightly more likely than the country youth to retain the original choice throughout the college experience; although the difference was small, this expectation was borne out by the data.

Rural social area differences were evident in that students from Areas D and E (the Ozarks region and Southeast Missouri) were most often in the group undecided about a vocation when they entered college. A good many more than average of the Non-changers came from the western areas of the state, social areas AB_1 and AB_4. It will be remembered that a majority of these students chose farming or veterinary medicine.

Family Factors. There was a marked tendency for oldest children to retain somewhat more tenaciously their original occupational choices. In addition there were some differences in the psychological and actual financial support accorded by parents, also in the degree to which parents became involved in encouraging activity on the part of their sons which might be expected to enhance the prospects of college entry and success.

Students were asked to rate the importance which they thought their parents attached to a college education. Large proportions of all three groups perceived great support from parents in this area. However, larger proportions of Non-changers than others thought parents considered a college education "the most important thing after high school." More Changers and Deciders thought parents considered this "important, but not really necessary."

Compared with other referents who were perceived to support students in college plans, parents rated considerably higher than any other, except that Non-changers felt highly encouraged by teachers. Siblings rated lower than counselors, friends, and teachers.

Parental economic assistance was expected by a majority of all students. Fewer Deciders expected parents to pay all of their expenses and somewhat more of them expected no financial help. However, approximately two-thirds of all groups expected parents to pay most or some of their college expenses; slightly more Non-changers expected parents to pay all.

Socio-economic Status of Parents. Three measures were used in comparing family socio-economic status and income variables; namely, occupation of the chief wage earner, estimated farm income for the farming contingent of the sample, and the North-Hatt Scale rating of the chief wage earner's occupation. Since opportunities for maturation and enhancement of the socialization processes are ordinarily greater at the higher socio-economic levels than at the lower, it may be expected that the more favorable life chances might also be reflected in earlier occupational decisions and firmer commitment on the part of the students coming from the more economically advantaged homes. For the farm groups as a whole this was true when the respondents' estimates of relative farm income in their own communities were used as the measure (See Table 12).

TABLE 12--PERCENT OF COLLEGE OF AGRICULTURE STUDENT PANEL CLASSIFIED BY STATUS OF OCCUPATIONAL CHOICE AND BY PRIOR FARM INCOME

PRIOR FARM INCOME	Total % (N = 145)	Status of Occupational Choice (1964-68) Non-changers % (N = 39)	Changers % (N = 39)	Deciders % (N = 67)
TOTAL	100.0	100.0	100.0	100.0
Above average	38.6	43.6	28.2	41.8
Average	29.0	18.0	35.9	31.3
Below average	9.0	5.1	5.1	13.5
Not farming	23.4	33.3	30.8	13.4

Thus it was that the Deciders more often showed farm incomes below average and Non-changers more frequently than others were from families of above average estimated income. Again, on the basis of the North-Hatt ratings of occupational prestige the situation was much the same (See Table 13). However, in relation to specific occupation it would appear that the incidence of indecision rates was higher among farmers than other groups particularly the professional, business, and proprietor groups.

The Decisional Process. Although choice of an occupational area and college attendance as a means of occupational fulfillment, where this is a requirement, involves an extended process or perhaps sub-processes (i.e., a series of influences and events operating through time), this sequence cannot be assessed with accuracy in this study. Nevertheless, some elements of process were considered; first of all, time of decision. Although there was little evidence to indicate that decision on an occupational area prior to college entry enhanced the possibility of continuing in college for the four years or until graduation, Non-

TABLE 13--PERCENT OF COLLEGE OF AGRICULTURE STUDENT PANEL CLASSIFIED BY STATUS OF OCCUPATIONAL CHOICE AND BY SOCIO-ECONOMIC STATUS

SOCIO-ECONOMIC STATUS*	Total % (N = 145)	Status of Occupational Choice (1964-68) Non-changers % (N = 39)	Changers % (N = 39)	Deciders % (N = 67)
TOTAL	100.0	100.0	100.0	100.0
50-54	1.4	0.0	0.0	3.0
55-59	6.2	5.1	7.7	6.0
60-64	3.4	5.1	5.1	1.5
65-69	11.7	2.6	23.1	10.4
70-74	8.3	15.4	5.1	6.0
75-79	60.0	61.5	51.3	64.1
80-84	2.1	7.7	0.0	0.0
85-89	2.8	2.6	5.1	1.5
Unknown	4.1	0.0	2.6	7.5

*as rated on the North-Hatt scale

changers were by a substantial margin earliest to seriously consider going to college. Over 40 percent said that they considered this as far back as they could remember compared to the Deciders who frequently deferred this consideration until the senior year in high school or even later (See Table 14). Thus, it seems that early decision on an occupation, continued commitment to the choice, and early serious consideration of college attendance were all positively associated with higher socio-economic status. These processes and related decisions came

TABLE 14--PERCENT OF COLLEGE OF AGRICULTURE STUDENT PANEL CLASSIFIED BY STATUS OF OCCUPATIONAL CHOICE AND BY TIME OF FIRST SERIOUS CONSIDERATION FOR GOING TO COLLEGE

TIME OF FIRST SERIOUS CONSIDERATION FOR GOING TO COLLEGE	Total % (N = 145)	Status of Occupational Choice (1964-68) Non-changers % (N = 39)	Changers % (N = 39)	Deciders % (N = 67)
TOTAL	100.0	100.0	100.0	100.0
After high school graduation	2.8	0.0	0.0	6.0
Senior year of high school	16.5	10.3	12.9	22.4
Junior year of high school	13.8	10.3	12.8	16.4
Sophomore year of high school	6.2	10.3	7.7	3.0
Freshman year of high school	16.5	15.3	23.1	13.4
While still in grade school	14.5	10.3	17.9	14.9
As far back as I remember	29.0	43.5	25.6	22.4
Never seriously considered it	.7	0.0	0.0	1.5

much slower in the Decider group both with reference to choosing an occupation and in first seriously considering college attendance.

A similar relationship was found with reference to decision on a major course of study in college with Non-changers generally showing an earlier decision in this respect. On the other hand, almost half of the Deciders were still undecided about a major during the first semester at the university. Even though the late choice is permissible with the first two years being prescribed and general preparatory, this general curriculum does not preclude an early choice of a major, which would be in line with an occupational choice already made.

Changes in Intervening Influences

What intervenes in occupational choice, what is a concomitant change, and what is more or less a determinant is problematical. However, in view of some inclination of students to adjust occupational choice in line with changing interests and idealized view of an occupation, such matters as occupational interests, idealized view of an occupation, and changing views concerning reasons for coming to college were thought of and described as intervening variables between the old or non-choice situation of students initially and what they said they wanted to do four years later. The procedure followed was first to recall and briefly recount the changes that occurred generally over the four year period and then to note how the changes considered varied with occupational Non-changers, Changers, and Deciders.

Reasons for Attending College. The reader will recall that freshmen students came to the university in 1964 with a strong occupational orientation and that this was a nearly universal priority consideration among students. Of the 64 reasons originally considered for coming to college (19 of which were reconsidered in 1968), the one that rated the highest was "I want my work to relate closely to my vocational goals, i.e., to help me with my future career," Deciders were distinctive in rating this item lowest of the three groups and Changers somewhat distinctive in that they rated the item somewhat higher than the other two groups. Deciders were also a little more inclined to upgrade such extrinsic reward considerations as providing a stable secure future (presumably through the occupation chosen), getting a "good job", perhaps financially, and in trying to move up in the world. With Deciders being more often of average and below average socio-economic status to begin with, such matters may have looked more important by comparison than to students from more affluent homes. Conversely Deciders were a little less inclined than others to intellectual and humanitarian considerations. Generally it was the Changers who rated these items higher than other groups. This is seemingly supportive of the strong interests they had in the personality fulfillment view of work. Non-changers also rated the humanitarian intellectual items quite high. Perhaps having already decided on a vocation they looked beyond to the broader values of a college education. Whatever the combination of explanations, these were operative before the students came to the university as 1964 freshmen.

The next question posed was whether there were changes in the salience of reasons given for coming to college and how these changes occurred among the occupational status categories. It will be recalled that two approaches were used to assess these changes, namely: (1) by the remaining 60 of the 100 students who did the original Q-sort assigning relative importance to certain of the highly rated items from the 64 statements used in 1964; and (2) by the remaining 85 students estimating whether they regarded each of 10 reasons for coming to the university as much less or much more, a little less or a little more important now than when they came to the university. (A neutral "about the same" category was also allowed). The response items selected closely paralleled those that were originally rated high by the students in 1964.

It will also be recalled that the latter method allowed a student to make an assessment of what he thought happened to his own feelings about each reason separately, and permitted an estimate on each quite independent of its relative importance among other reasons. As a result, when students thought of how important certain reasons were, compared to how important they seemed when they entered college, there was a definite trend toward a higher evaluation on most of the things which were initially considered important. In other words, freshmen were aware of values attached to various facets of education, and as a result of maturation processes these reasons assumed greater relative importance by comparison as seniors. An investment of time and energy in pursuit of some goals and values augmented the significance of these goals in the thinking of the investors.

On the other hand the modified Q-sort forced the student to place a relative weight on 19 reasons originally rated high in 1964 (with the exception of one fun-social orientation reason). Thus it could be that students could say all or most of the reasons were regarded as more important to them in 1968 than in 1964 by the second measure and rate them relatively different by the Q-sort measure at the two points in time. As will be seen in Table 15 some variations indeed did occur. This was particularly true in the declining relative importance of occupational reasons for coming to college as initially predicted. It will be further observed that the greatest decline occurred in "I want my university work to relate closely to my vocational goal, i.e., to help me with my future career" reason, and furthermore, that the decline was strongest for Changers. Deciders showed the most decline in still another occupationally oriented reason, namely, "It takes a good college education to get a job these days."

As a whole, Changers definitely moved to a position emphasizing making money, looking out for oneself, and moving up in the world. In addition they showed less increase than the others on the importance attached to having a purpose in society and thinking about the other fellow. They showed considerably more over-all absolute change than the others, when changes in both directions were considered.

Deciders rated the security reason highest in 1964, but by 1968 it had declined to about average while the other two groups actually increased in the importance they attached to this statement. Generally, Deciders downgraded the occupational status achievement reasons more than Changers and Non-

TABLE 15--CHANGES IN AVERAGE RATINGS OF IMPORTANCE GIVEN DESIGNATED REASONS FOR COMING TO COLLEGE BY 1964 COLLEGE OF AGRICULTURE FRESHMEN, CLASSIFIED BY STATUS OF OCCUPATIONAL CHOICE (1964-68)

REASONS FOR COMING TO COLLEGE	Ratings Assigned in 1964 and 1968, classified by Status of Occupational Choice							
	All students (N = 60)		Non-changers (N = 17)		Changers (N = 15)		Deciders (N = 28)	
	1964	1968	1964	1968	1964	1968	1964	1968
OCCUPATIONAL - STATUS ACHIEVEMENT								
You just can't get along without money these days. That's one thing I had in mind.	7.15	7.31	7.23	7.05	6.86	7.40	7.25	7.42
It takes a college education to get a job these days.	8.35	7.73	8.00	7.58	8.00	7.40	8.75	8.00
Above all what the University will do is provide me with a stable secure future.	7.63	7.78	6.76	7.70	7.46	7.93	8.25	7.75
I want my University work to relate closely to my vocational goal, i.e., to help me for my future career.	9.23	8.71	9.41	9.17	9.73	8.73	8.85	8.42
These days you have to look out for yourself. I thought getting a good education would be a good way to do it.	6.98	7.40	7.05	7.05	6.60	7.53	7.14	7.53
Everyone ought to try to move up in the world. You sure can't do this without a college education.	7.30	7.56	6.88	7.00	7.06	7.93	7.67	7.71
HUMANITARIAN - INTELLECTUAL								
I feel that I want to have a purpose in society and that the University will help me to gain it.	7.43	8.36	7.47	8.82	7.60	7.80	7.32	8.39
Somebody ought to be thinking about the other fellow these days. I want my life to count something for other people.	6.60	7.21	6.82	7.05	6.66	7.06	6.42	7.39
Knowledge is its own reward. That's mainly why I'm here.	7.56	7.41	7.52	7.35	7.66	7.33	7.53	7.50
I felt that being here will make me a more complete and well-rounded person.	7.68	8.55	7.70	8.58	7.73	8.60	7.64	8.50

TABLE 15--(Continued)
CHANGES IN AVERAGE RATINGS OF IMPORTANCE GIVEN DESIGNATED REASONS FOR COMING TO COLLEGE BY 1964 COLLEGE OF AGRICULTURE FRESHMEN, CLASSIFIED BY STATUS OF OCCUPATIONAL CHOICE (1964-68)

REASONS FOR COMING TO COLLEGE	Ratings Assigned in 1964 and 1968, classified by Status of Occupational Choice							
	All students (N=60)		Non-changers (N=17)		Changers (N=15)		Deciders (N=28)	
	1964	1968	1964	1968	1964	1968	1964	1968
LIFE ADJUSTMENT								
College allows you to gain more independence without being thrown completely on your own.	6.75	7.31	6.70	7.52	6.46	7.33	6.92	7.17
The social aspects of college are really more important than the grades I receive.	6.06	6.80	6.05	6.64	6.13	6.80	6.03	6.89
It is an important part of my objective in coming to the University to learn to get along with other people.	7.28	8.00	7.00	8.05	7.46	8.13	7.35	7.89
I'm not out to change the world or other people. I want to get along with them and get ahead.	7.30	7.51	7.17	7.41	7.13	7.93	7.46	7.35
I like the idea of being away from home at the University. I have to handle my own affairs and I like this.	6.75	7.35	7.00	7.70	6.66	7.40	6.64	7.10
UNIVERSITY QUALITIES AND OTHER								
The University has better professors than smaller colleges. I expect better training here.	7.60	7.78	7.47	7.64	7.86	7.66	7.53	7.92
The University has a high academic reputation; that's why I came here.	7.06	7.55	7.17	7.41	7.33	7.66	6.85	7.57
My parents (or brothers and sisters) encouraged me to come and did what they could to help me.	7.45	7.63	7.76	8.00	6.86	7.46	7.57	7.50
I thought college life would be a new and exciting experience.	6.78	6.98	6.88	7.17	6.40	6.86	6.92	6.92

changers. They upgraded more than the others statements indicating a concern for the other fellow, the social aspects of college, and the better professors and high academic reputation of the university.

Non-changers presented no unique pattern of downgrading such as the other two groups. They increased somewhat more than the others on ratings given to reasons involving future security, having a purpose in society, becoming a complete and well-rounded person, and getting along with people.

In the opinion of the researchers, greater confidence can be placed in the relative evaluations gained from Q-sort rankings done in 1964 and 1968 than on personal opinion in regard to changes in importance attached to individual ties. The only limitation in making direct comparisons is that imposed by the methodological improvision cited elsewhere. As noted there, interpretations can be made with much confidence concerning the downgrading of certain reasons, less about the upgrading. However, the above comparisons could reasonably be made between the increasing or declining importance attached to various reasons by the three groups of students.

Changes in Idealized View of an Occupation. Table 16 indicates that initially all students were substantially materialistic-doers. Non-changers apparently

TABLE 16--COLLEGE OF AGRICULTURE STUDENT PANEL CLASSIFIED BY STATUS OF OCCUPATIONAL CHOICE AND BY AVERAGE SCORES ON DESIGNATED IDEALIZED VIEWS OF AN OCCUPATION AS RATED IN 1964 AND 1968

IDEALIZED VIEWS OF AN OCCUPATION	Status of Occupational Choice (1964-68)							
	All students (N=145)		Non-changers (N=39)		Changers (N=39)		Deciders (N=67)	
	1964	1968	1964	1968	1964	1968	1964	1968
Materialistic doer	2.27	1.84	2.38	2.20	2.20	1.52	2.25	1.81
Management creativity	1.86	2.27	1.91	2.28	1.89	2.32	1.81	2.25
Extrinsic rewards	2.49	2.47	2.28	2.24	2.23	2.60	2.77	2.53
Personality fulfillment	2.51	2.72	2.51	2.83	2.57	2.53	2.47	2.77

changed less in this respect; Changers varied most from their initial rating on this view. As expected, all declined in the value they placed on work with tools and machines, physical activity, and out-of-door work. Also as expected, there was increasing importance placed on management, working with people, and creative thought and development of ideas.

Differences were noted on the extrinsic rewards items, where Changers moved up very sharply on these values, while both other groups declined. On similar values attached to reasons for coming to college, Changers also showed more interest in making money, watching out for oneself, etc. This group, on both educational and work values, moved toward an emphasis on prestige, money, and security, and somewhat away from self-fulfillment and humanitarian ideals.

The rating of Changers on the personality fulfillment view of an occupation further supported this, as they were the only group that showed a decline, even though slight, on this view. Other groups showed a decided increase in the importance of personality fulfillment items.

Deciders, on the other hand, had the highest rating on the extrinsic rewards view when they entered college, but declined sharply on this value by 1968. Again, consistency was noted between these work values and the previously mentioned educational ones. In 1964 Deciders ranked highest on such educational values as making money, security, moving up in the world, looking out for oneself, and a college education as instrumental to getting a job. In 1968 they downgraded these more than either Changers or Non-changers. The trend toward decreased evaluation on extrinsic rewards of both work and education was evident.

Changes in Measured Vocational Interests. The prime questions here were whether interests changed over the four year period and if so in what manner in relation to the occupational status categories. Certainly interests would be expected to change and in a manner somewhat dependent upon differential participation in various aspects of the college experience; also hopefully occupational choices would move in the direction of developing interests and thus to greater congruency between interests and choices in 1968 than in 1964. Ideally, Non-changers would develop an enhanced interest base in support of their tenaciously held occupational choices, Deciders a stronger interest base upon which to decide, and Changers would make choices more in the direction of measured interests in 1968 than in 1964.

The Strong Vocational Interest Blank (SVIB), a standardized and much used instrument for measuring congruency of interests in relation to those held by persons successfully employed in various occupations, provides interest measures for both general occupational areas and specific occupations. Where the desired specific occupational scale is not available, inferences can ordinarily be made from appropriate occupational group scores. As previously noted, the scores assigned are calibrated on a standard score range from 0 to 65. A score of 45 or above for a particular occupation is assigned an A rating which means that a person has interests similar to those of people sucessfully engaged in that occupation and would likely enjoy that work; a score of 30 to 44 is assigned a B-, B, or B+ rating which means that although he probably has parallel occupational interests one cannot be as sure of it as with the A ratings. In addition, scores in the C range and below indicate that the person definitely does not have interests like people engaged in that kind of work and probably should consider something else (Strong, 1966).

The most unexpected change in measured interests occurred for Non-changers; although occupational choices for them did not change, SVIB scales matched with their 1964 occupational choices showed lower scores in 1968 than in 1964. This would have been expected of the Changers who made some rather drastic shifts in occupational choices during the interim period. And indeed, this did occur, but only slightly more than for the group who didn't change vocational objectives. Since most Non-changers who took jobs did so in their chosen

fields, it must be concluded that there was little evidence of increased congruity between jobs taken and measured vocational interests on the 1968 SVIB for this particular group. They tended to hold tenaciously to and value the validity of their original choice while the interest base of support receded.

Non-changers were also distinctive in a marked decline in the number who had primary interest patterns at the later point in time. In 1964, more Non-changers than others had primary interests patterns, which indicates some rather well developed and differentiated interests at that time; in 1968, unlike both other groups, this proportion decreased rather than increased. Furthermore, unlike the others, 61.2 percent of Non-changers had fewer high ranking scales (A and B+) in 1968 than in 1964.

All of this suggests that having a strong occupational commitment and retaining it throughout college is not conducive to retention of initial measured interests or to a general broadening of a variety of other interests. Rather, these students manifested less interest in their specific occupational choices and presumably showed less broadening of interests as a result of their college experiences than did other students. These differentials in experience and their results will be examined in more detail later.

Deciders showed a somewhat different response in terms of measured vocational interests. A larger proportion, compared to Non-changer and Changers, showed an increase in the number of A and B+ scales during the four years. Initially they had shown evidence of a slower development of occupational interests, since fewer of them had a primary interest pattern as freshmen. However, in 1968, they were about average in this regard. There was a definite trend toward congruity between their measured interests and 1968 occupational choices, this being noted for approximately 60 percent of the group. There seemed to be the development of a broad interest base during college, which related quite closely to vocational choices that they made during college.

Changes in occupational choices seemed to be related to an increase in the number of A and B+ scales and in the number of primary interest patterns. Measured interests for Changers showed more congruity with 1968 choices than with 1964 choices, suggesting that interests changed during the interim period much in line with occupations which this group chose as seniors.

The College Experience as a Direct Conditioning Influence

The college experiences of students may bring about changes in vocational interests, idealized views of an occupation and basic values upon which choices are made. These in turn may be assumed to influence occupational choices in varying degrees. Changes in these intervening influences may be assumed to be at least a partial product of the college experience. However, effects on choice may be more direct as with courses of study pursued, differential association with peers, work experiences while on the campus, and interaction with the faculty. In this section an effort will be made to arrive at possible inferences on the basis of the differential manner in which the decider catergories of students participated in the various experiences. Changes in majors already observed may be more properly regarded as a concomitant change. For many occupations a number of majors are quite appropriate even though for some a change in one

may necessitate a change in another. Thus, in some cases the relationship between choice of a major and an occupational area of specialization may bear a cause and effect relationship, in other cases little or none at all, and in still others the change in major may operate as an intervening variable in effecting a change in the occupational choice.

Student-Faculty Relationships. College of Agriculture freshmen are assigned advisers with whom they may confer on any matter which they wish to bring to the adviser's attention. They naturally also become acquainted with other members of the teaching, extension, and research staff of the college with whom they may interact. The question here is how the relationships with adviser and faculty varied by occupational decisional categories of students. Each student was accordingly asked to indicate whether he thought a series of relationships with his adviser was possible. These, which are listed in Table 17, ranged from such intimate matters as stopping by the adviser's house for a friendly chat to talking to him in his office about official matters associated with the student's own study program. In terms of the decider categories the greatest incidence of perceived possibility and intimacy of contacts would be expected among Changers and perhaps next most among Deciders who had to develop a

TABLE 17--PERCENT OF COLLEGE OF AGRICULTURE STUDENT PANEL CLASSIFIED BY STATUS OF OCCUPATIONAL CHOICE AND BY DESIGNATED RELATIONSHIPS DEEMED POSSIBLE WITH OWN ADVISER

DESIGNATED RELATIONSHIPS DEEMED POSSIBLE WITH OWN ADVISER	Status of Occupational Choice (1964-68)			
	All students % (N = 145)	Non-changers % (N = 39)	Changers % (N = 39)	Deciders % (N = 67)
Exchange greetings on street	95.9	100.0	89.7	97.0
Discuss study program at the university	92.4	89.7	89.7	95.5
Walk into the office to talk about school problem	90.3	87.2	87.2	94.0
Write recommendation for you	85.5	82.1	82.1	89.6
Ask for an explanation about a grade given	84.8	92.3	76.9	85.1
Ask for suggestions to improve grades	82.8	87.2	76.9	83.6
(You think) knows you by your first name	82.1	79.5	76.9	86.6
Talk about important decision which affects your future	76.6	71.8	74.4	80.6
Walk into the office for a friendly chat	73.1	74.4	69.2	74.6
Argue outside class about a point of view explained in class	69.0	74.4	64.1	68.7
Has a real interest in your problems (you think)	66.2	64.1	64.1	68.7
Talk about a family problem that may make you drop out of school or is interfering with your work	53.8	53.8	59.0	50.7
Stop by or visit shortly in teacher's home	33.8	43.6	38.5	25.4

knowledge base upon which to arrive at an occupational decision. Non-changers, presumably feeling quite sure of what they wanted out of college, would have less reason to contact advisers and any other than a few faculty members representing their own interest specialty.

The reader will recall, and note in Table 17, that generally speaking most students felt they could discuss academic and friendly matters with advisers. However, the crucial question here is how these relationships varied by the decisional categories. Accordingly, it will be seen in Table 17 that for relationships concerning academic interest such as grades or points of view expressed in class, Non-changers more frequently deemed these interactions possible. Deciders more often than others felt it possible to have such a friendly relationship as stopping by the office for a friendly chat or to talk about a school problem, or being known by their first names. A large proportion also felt that it was possible to discuss their study programs, get a recommendation, or talk about an important decision which would affect their future. Changers somewhat more frequently than others felt they could speak with advisers about a family problem which might make dropping out of school a necessity.

There is the suggestion that Deciders probably felt somewhat more free to enter into the designated relationships with advisers; Changers, on the other hand, seemed to feel it possible to enter into designated relationships with more faculty members, thus probably having a wider range of such associations than other students.

Social Participation. The classification of campus organizations given on pages 24-25 indicates the broad range of opportunities a student has to participate with peers and to some extent with the faculty in various activities. Academic agricultural organizations include among others the Agriculture Council, Block and Bridle Club, Collegiate Future Farmers of America, Independent Aggies, and various academic area clubs associated with major areas of study. Homecoming Committee, Student Government, Intrafraternity Council and student political organizations were among those classed as University-wide. Honorary organizations included Alpha Zeta, Gamma Sigma Delta, Alpha Tau Alpha, and others; music organizations were the concert band, Marching Mizzou band, etc.; and social orgainzations included Alpha Gamma Sigma, Alpha Gamma Rho and Farm House.

The consequences of choice can be considerable. A student can choose a course of essentially no participation in formal group activities in which case he is essentially cut off from one important aspect of college life. On the other hand, he can choose a social fun course of action or one in which he deliberately works at making the "right contacts" and develops skills of social manipulation in line with the idea that these skills and contacts may be more important than the grades he receives in the university. The specialized and committed student, can choose associations in such a manner as to reinforce what he already is and believes. If a student chooses broadly oriented groups that involve students from other colleges or with other interests he is liable to be exposed to many ideas and influences he didn't plan on in the first place. Such participation is likely to bring old ideas into question and start thought processes along new

lines, i.e., the latent consequences of participation in social-fraternal or university-wide organizations might be to enhance changes in views on many subjects including those relating to a chosen occupation.

The results of the aggregate scores by decider categories are entered in Table 18. It may be seen that the agricultural academic organizations received

TABLE 18--MEDIAN SOCIAL PARTICIPATION SCORES FOR COLLEGE OF AGRICULTURE STUDENT PANEL FOR SCHOOL YEAR 1967-68, CLASSIFIED BY STATUS OF OCCUPATIONAL CHOICE AND BY CATEGORY OF ORGANIZATION

CATEGORY OF ORGANIZATION	Median Social Participation Scores by Status of Occupational Choice 1964-68			
	Total (Median) (N = 145)	Non-changers (Median) (N = 39)	Changers (Median) (N = 39)	Deciders (Median) (N = 67)
Agricultural academic	5.4	6.9	5.6	3.6
University-wide	0.7	0.7	0.8	0.6
Honorary	0.8	0.8	0.8	0.7
Social	0.8	0.8	1.1	0.6
Student religious	0.5	0.6	0.5	0.5
Social participation in all organizations	9.9	15.8	15.8	6.6

the widest support, accounting for over half of the total participation. These organizations provide activities of common concern to particular professional or academic interests, in addition to having social activities as a part of their regular routine. Thus, students may receive quite diversified benefits from participation in such organizations and this may partially account for the wide interest shown in them. Participation in other kinds of groups did not vary widely; honorary and social organizations showed the next highest participation with university-wide and religious organizations following in that order.

Non-changers and Changers had identical total social participation scores, varying from each other primarily in two respects: Non-changers had higher participation in the academic organizations and Changers had somewhat higher scores in the social organizations. Deciders were quite variant in having less than half as much total participation as others, the greatest difference being in their comparatively low participation in agricultural academic organizations.

The median number of organizational memberships per year revealed an interesting pattern. There was in increase each year up to the junior year and then a leveling off, with a slight decrease during the senior year. This pattern was also noted for Deciders. Non-changers and Changers showed their maximum memberships during the sophomore year, with a leveling off during the last two years. This suggests a possible relationship between being quite definite about occupational decisions and "settling down" into a pattern of organiza-

tional involvement. This pattern is reflected in the students' own evaluation of their participation. Almost half of them stated that they were more active in organizations as seniors than when they were freshmen. However, less than one-third said they were more active as seniors than as juniors.

Work Experience. Another way in which a student can participate in the life of a college campus is through work experiences. His selection of a particular job, along with the nature and location of the work, reveals something about his occupational interests and views. Even though a student cannot be the professional or entrepreneur to which he aspires, he can often work closely enough to such persons to see what an occupation of the type under consideration is really like and what it means to those participating in the vocation he eventually intends to follow. Such an experience can be equally devastating because in this kind of setting the halo effect fades into the background and the more routine and less exciting matters move forward. On the other hand, a work experience may be no more than a means of providing subsistence while a student is in college, and of value to him only as he determines that this occupation is not one which he wishes to follow. In any case one is sure to learn a bit more about what the work world is like. Even though a student is not so free to choose work assignments in the university setting as in matters of social participation, opportunities do eventually present themselves to those who are persistent which allow experiences that will help them size up some of the pros and cons of a chosen occupation.

It has already been noted that approximately 84 percent of the students were employed at some time during their stay in college. This, plus the fact that well over one-half of the students indicated that they were paying half or more of their college expenses from their own or spouses' work and savings, plus an additional 29 percent who were paying at least one-fourth, attests to the economic necessity of work while in college.

Differences between the three groups were slight, with Deciders showing slightly more who reported no job during the four years (See Table 19). Non-

TABLE 19--PERCENT OF COLLEGE OF AGRICULTURE STUDENT PANEL CLASSIFIED BY STATUS OF OCCUPATIONAL CHOICE AND BY EMPLOYMENT WHILE IN COLLEGE AND RELATIONSHIP OF JOB TO 1968 MAJOR

		Status of Occupational Choice (1964-68)		
EMPLOYMENT WHILE IN COLLEGE AND RELATIONSHIP OF JOB TO 1968 MAJOR	Total % (N=145)	Non-changers % (N=39)	Changers % (N=39)	Deciders % (N=67)
TOTAL	100.0	100.0	100.0	100.0
University job related to major	34.4	56.4	23.1	28.3
University job not related to major	16.6	5.1	12.8	25.4
Non-university job related to major	6.2	5.1	7.7	6.0
Non-university job not related to major	26.9	18.0	43.6	22.4
No employment	15.9	15.4	12.8	17.9

changers more often had a university job related to their major field. This suggests that having employment closely related to an academic major is also related to the retention of a stated vocational choice. Whether having a definite occupational goal predisposes one toward jobs in that field or having a job related to a vocational goal (tentative or not) strengthens one's commitment to that goal is not revealed by the data.There does, however, seem to be some relationship between these.

Changers tended to hold non-university jobs not related to their 1968 major fields. More than half of them were employed in the local community. Such work activities probably provided community experiences which brought them in contact with societal values related to monetary gain and social prestige derived from occupations. They may have seen the value placed on money demonstrated in fellow workers' patterns of conspicuous consumption and utilization of leisure, and internalized to a certain extent these same values for themselves.

Deciders, on the other hand, more often had jobs in the university even though over one-fourth were not related to their majors. They thereby probably received less exposure than Changers to status achievement activities of associates and more to matters of academic inquiry and to satisfactions derived from the work activity itself. The different work environments may have been factors in the differential changes in values of the two groups.

All three groups showed an increase in the median hours worked from freshman to senior years. Deciders worked more hours as freshmen but fewer than others as seniors. Changers worked only 0.9 median hours as freshmen, compared to 10.5 for Non-changers and 12.4 for Deciders. As seniors, however, they worked almost the same number of hours as Non-changers.

Academic Achievement. Certainly the way a student participates in the academic aspects of college life and the success that he has in this activity are both limiting and predisposing factors to many alternative courses of action including an occupational choice. The relationship of changes in majors and occupational choice has already been discussed. Only one additional aspect of academic participation will be examined here, namely, academic achievement level. The central question considered is whether or not academic difficulties promoted changes in occupational plans.

It will be seen from Table 20 that Non-changers were good performers; 95 percent had a cumulative grade point average of 2.0 and above. Although Changers more often than others gave "not doing well in old field" as their reason for a change of academic major, having academic difficulties was clearly not the basic reason for their changes of occupational choice. Over 80 percent of them had a 2.0 or higher cumulative grade point average. Twice as many shifted out of pre-veterinary medicine as the number indicating academic difficulty as a reason for change.

Deciders showed more variation than the other groups in academic achievement. Approximately one-fourth had grade point averages below 2.0, while a larger proportion than others were in the 3.0 and above category. Further investigation of the latter showed that 70 percent of this group had a high school percentile rank above 90, and half had scholarships. Mothers of about half were college trained; all of those living on farms reported average or above

TABLE 20--PERCENT OF COLLEGE OF AGRICULTURE STUDENT PANEL CLASSIFIED BY STATUS OF OCCUPATIONAL CHOICE AND BY CUMULATIVE GRADE POINT AVERAGE

CUMULATIVE GRADE POINT AVERAGE	Total % (N = 145)	Status of Occupational Choice (1964-68) Non-changers % (N = 39)	Changers % (N = 39)	Deciders % (N = 67)
TOTAL	100.0	100.0	100.0	100.0
3.50-4.00	4.1	5.1	5.1	3.0
3.00-3.49	8.3	5.1	5.1	11.9
2.50-2.99	32.4	48.8	30.9	23.9
2.00-2.49	37.2	35.9	41.0	35.8
1.50-1.99	15.9	5.1	12.8	23.9
1.00-1.49	2.1	0.0	5.1	1.5

average incomes; half were oldest children in the family; and 70 percent chose the professions or business as their occupational choice. All of these characteristics were more often evident for Non-changers than for Deciders as a whole.

It seems that for this panel of students academic achievement was somewhat related to the status of their occupational choices. Doing well in course work seemed to be related to retention of initial choice, while achieving less well in academic pursuits seemed to be related to making a late choice of occupation. However, a causal interpretation is not warranted from these data.

SUMMARY ANALYSIS

This study was concerned with changes in vocational interests, values, occupational choices and majors that occurred in the 1964 freshmen class in the Missouri College of Agriculture as they progressed through four years of college, and with the background and experience factors associated with the changes made. The chief focus of attention was on changes in occupational choices and commitments that occurred in the students.

The original 255 freshmen that had entered the college in 1964 had declined to 145 by the winter, 1968, semester when the reassessment of changes made and participation in the student sub-culture was undertaken. Four of their number had graduated in January 1968; the rest would normally be expected to graduate at the end of the winter, 1968, semester; 110 had left the university in the meantime without a college degree. About 80 percent (79.6) were from the country (farm and rural non-farm)and 20.4 percent were from towns and cities of the state. Although the focus of attention was on the 145 who stayed in school, some comparisons of the ones who stayed and the 110 who left were undertaken.

Data were obtained from questionnaires administered in the fall of 1964 and spring of 1968 at which time questons were asked about their background, prior experiences, their views of and orientations toward vocations, vocational choices, and their majors. In 1968 they were also asked about their academic, social, and work experiences while in college. In addition 100 of the 1964 freshmen were given a Q-sort of 64 reasons for coming to the university. They were asked to arrange these reasons on a most important-least important basis in terms of their own decisions to enter the university. In 1968 the remaining 60 of the original 100 were asked to do a modified Q-sort in which they were again asked to arrange the highly rated reasons from the 1964 sort in terms of importance for going to college as they saw them four years later.

Strong's Vocational Interest Inventories (SVIB) were administered to the students as freshmen and again in 1968 as part of the guidance program associated with the dean's office of the College of Agriculture. Scores assigned in 1964 were adjusted to allow comparison of responses resulting from an interim revision of the inventory. Such secondary data as the high school rank and cumulative grade point averages on record in the university offices were also used.

Town, City-Country Differences

Prior residence differences were ascertained partly because city and country differences in characteristics of students and the way they relate to the university persist and partly because of the practical interest of agricultural college administrators who have found it necessary to relate the agricultural college to the needs and interests of city youth as well as those from the country. Enumeration and interpretation of the more salient of these differences follow.

Persistence in School. Although intentions to farm and farm residence itself seem to have a depressing effect on college attendance, a higher proportion of the country than the city youth actually remained in college during the four year period. Even with the very broad course offerings of the college of agriculture and study programs which permitted much freedom to take courses in other schools, the agricultural college curricula were still likely to appeal more to the country than to the town-city youth. Also country youth had a somewhat stronger commitment to academic matters both in the present and in the recent past. Their academic records in high school were slightly better than the students of town-city origin and in college they participated more in extra-curricular academic activities.

Maturational Differences. Occupationally, decisional processes had not progressed as much among the country as the town-city youth. Although differences in development of SVIB primary interest patterns were nil, more of the boys from the city (77.8 percent) had made at least a tentative occupational choice at the time of entering college than those from the country (48.3 percent). The proportion choosing farming was, of course, much higher for the country than the town-city boys. The most chosen occupations for country boys were farming and veterinary medicine; for the town-city the last only. Measured interests were also aligned with farming for the country students and in considerable degree toward veterinary medicine for the town-city boys. However, on the whole, measured occupational interests were initially quite undifferentiated and not particularly strong in either group of students. More town-city than country boys had made tentative choices of academic majors by college entry time, 96.3 percent and 72.0 percent, respectively. Pre-veterinary medicine was the most frequently chosen major, again indicating the strong vocational orientation of both student groups.

In another sense country boys were more self-reliant than the town-city. They and their wives financed more of their college expenses from their own and spouses earnings and/or savings. Although they received considerably less support from their parents than town-city youth, they were much more frequently recipients of scholarships (48.3 percent and 15.8 percent, respectively) and much more likely to be recipients of loans (28.0 percent and 7.4 percent, respectively). They were also more likely to have worked in partial payment of college expenses, particularly during the freshman and sophomore years.

Occupational Orientation. Although all students showed a very strong occupational orientation for attending college the town-city were even more so inclined. They stressed the extrinsic rewards of an occupation, i.e., security, good retirement plan, being able to keep the job as long as one wanted to more than country boys. The personality fulfillment view was strong for both groups, both initially and in the final analysis. The country youth were most distinctive (initially and only a little less in the final analysis) on the materialistic-doer view which stressed work requiring much physical activity, work out of doors, working with things, and work involving use of tools and machines. This would seem to be a natural consequence of the environmental conditions under which youth from the country lived and, perhaps, came to appreciate.

Social Participation. Other differences were evident in the extent and kind of participation in organized activities on the campus and in interaction with the university faculty. Organization-wise, students had the option of participating in essentially academic, honorary-scholastic, social-fraternal, religious, and university-wide activities. The last tended to cut across the others and included such things as student government and Savitar frolics.

Social participation ratings based on membership, varying degrees of attendance at meetings, serving on committees, and as officers in the organizations were used to measure the amount of participation for comparative purposes. The average participation score for country boys accordingly computed was a little higher than for the town-city. However, major variations were in participation totals and kinds of participation. There was a tendency to bi-modal participation rates for the country youth, i.e., some with no participation and some with much. This was not true for the town-city boys. Country boys participated much more heavily in the academic and honorary activities while the town-city were considerably more active in the social-fraternal and the university-wide activities. Comparatively few of the country boys participated in the latter but the few who did were generally very active.

Perhaps earning one's way in school and seriousness of academic purpose operated to reduce the participation of country boys in social activities and to enhance participation in less time consuming academic activities. Also norms of social exclusion may have differentially operated to exclude more country than town-city youth from the social-fraternal organizations. In any case participation differentials between the two groups of students were indeed quite distinct particularly in regard to kind.

Interaction With Faculty. In large schools and in the absence of ways to encourage friendly relationships, interaction between students and faculty is likely to be minimal with students feeling somewhat alienated in the anonymous impersonal college environment. To get some assessment of the extent to which this may have been the case the students were asked to indicate whether they thought a wide range of relationships ranging from such things as talking to advisers and faculty about grades and college courses to dropping into their homes for a friendly chat were possible, also with about how many faculty members they felt that each of the relationships would be possible.

The first general conclusion in relation thereto was that students felt quite free to consult with advisers and with at least some faculty members about a wide range of matters some of which were quite personal in nature. A second salient conclusion was that country boys were less restrained in their interaction with advisers and the faculty than the town-city, perhaps reflecting neighborliness norms more prevalent in rural than in urban environments.

Students Who Stayed vs. Those Who Left

Students who stayed in college were:

1. slightly more likely to have been from the country than town-city,

2. to have had *no more* support psychologically or financially from parents,
3. to have been the oldest child in the family,

Students who left:

1. were more likely to have been influenced relatively more toward going to college by their peers or other persons,
2. were more likely to have made a last minute decision to enter college,
3. emphasized extrinsic rewards (pay, retirement, and security) of an occupation slightly less.
4. were much poorer prospects academically to begin with and were poorer academic performers while in college.

Occupational Changers, Non-changers and Deciders

Of the students remaining in college until the winter semester of 1968, 26.9 percent did not change their 1964 occupational choice, 26.9 percent did and the remaining 46.2 percent made up their minds during their stay in college. Occupational areas which gained were social services, sales, business, social sciences, and farming, in that order. The general professions including law, journalism, college teaching, and veterinary medicine showed losses.

In order to provide a sufficient number of students in the three decisional categories for judgmental purposes the country, town-city classification was deleted from this part of the study.

Background Factors. Town-city youth who made their occupational decisions earlier were also slightly more persistent in their original choices. Areawise, students from the more economically advantaged northern and west-central parts of the state were more stable in their occupational choices than those from the less advantaged southern and south-eastern parts of the state. The latter were also slower to decide.

It would seem that economic disadvantage tended to retard early firm occupational decisions. This was further suggested by economically related family factors associated with the occupational choice status. A few more of the Non-changers than of the other two groups expected their parents to pay all of their college expenses. In accord with the same line of reasoning Deciders on the average came from farm families with somewhat lower incomes than Non-changers. Evidence from the North-Hatt occupational ratings of a students' parents showed much the same thing, all suggesting an association of economic disadvantage with delayed occupational choices.

The College Experience

The college experience can be expected to have both direct and indirect influences on occupational choices. In the first instance, exposure to new knowledge from courses, interaction with faculty and students, and work experiences may be expected to directly influence occupational choices. In the second, these same experiences may be expected to broaden horizons resulting in changes in interests and views of what an occupation can offer, perhaps also in basic

changes in one's concept of self resulting in changes in the way occupational attributes are valued and occupations chosen.

Intervening Influences

Of these, three were considered:
(1) changes in reasons for coming to college,
(2) changes in idealized view of an occupation,
(3) changes in vocational interests.

Deciders, being from somewhat more economically disadvantaged homes, perhaps quite naturally initially stressed financial and security matters as major reasons for coming to college a little more than students in the other two groups. At the same time they tended initially to downgrade intellectual and humanitarian considerations. This was in contrast to the other two groups who rated these relatively higher, all within an overriding predominance of what a college education could contribute occupationally.

Actually students perceived many reasons (occupational, humanitarian, personality fulfillment and social) for coming to college as being more important in 1968 than in 1964. However, within this general upgraded context the occupational reasons tended to recede relative to the others. This was most true for Changers. At the same time they were the ones who most upgraded such self-seeking reasons as making money, looking out for oneself, and moving up in the world. Conversely, they granted less increased importance to such reasons as "having a purpose in society" and "thinking about the other fellow". Within this general pattern of change there were also erratic changes in the way they rated the reasons. Aggregate changes were greater for them than for either Non-changers or Deciders.

Deciders, who initially rated security reasons highest, showed a decline in importance attached to this reason while the other two showed an increase. In contrast to Changers, who seemed to show some disillusionment with initial humanitarian views, Deciders tended to upgrade them as the years passed.

Except for a slight inclination to upgrade security, having a purpose in society, becoming a complete and well-rounded person, and getting along with people, Non-changers showed little change over the four year period. Thus in terms of ratings assigned reasons for coming to college, Deciders and Non-changers tended to become more humanitarian and appreciative of general educational objectives while Changers became more self-seeking.

Changes in idealized views held of an occupation for self tended to substantiate these general observations, with Deciders and Non-changers moving up sharply on personality fulfillment views while Changers, higher to begin with, showed a slight decline.

Changers, unlike others, again showed sharp increases on the extrinsic rewards view while Deciders, as also indicated by reasons for coming to college, showed a recession in importance attached to this view. All tended to move up on the management-creativity view of an occupation and down on the materialistic-doer view, Changers most of all and Non-changers least.

It would almost seem that occupational Changers went through a period of disillusionment with regard to humanitarian values initially held more strongly while Deciders like Non-changers tended gradually to internalize these views increasingly more as time passed.

In regard to changes in measured vocational interests the most unexpected change was a decided decline in the scores of SVIB scales matched with vocational choices of Non-changers, even though these students held to their original choices and continued to express more satisfaction with them than students in the other two groups. Thus, congruity between choice and measured interests for the Non-changer group decreased decidedly. This group was also distinct in the decline in the number of primary interest patterns held, these being interests congruent with occupational areas of possible choice. Thus, the receding interest base of the Non-changers seemed to have occurred by a flattening of interests, perhaps a condition that could be expected to precede re-formation of salient new ones.

Deciders on the other hand who had fewest primary interest patterns to begin with, developed more than any other group but ended up with about an average number, thus forming an interest base congruent with a majority of the occupational choices. For Changers, new occupational interests were more congruent with their 1968 occupational choices than the 1964, thus indicating a tendency to increasing congruity between the two.

Direct Conditioning Influences. College experiences surely influenced occupational interests which in turn must have been a factor in the occupations chosen for all of the groups concerned. Even original occupational choices of Non-changers were quite in agreement with their initially strong farm and veterinary medicine interests.

Conceivably college experiences which operated to bring about changes in interests, essentially a slow and unconscious process, had direct effects on the more conscious process of making an occupational decision. Although the data at hand did not permit claims of direct cause and effect relationships, the manner in which the three groups of students differentially participated in the college experiences permit at least tentative inferences concerning influence.

Thus, Deciders more often than others felt such friendly relations as stopping by the adviser's office for a friendly chat or talking to him about school problems were possible.

Changers, on the other hand, were more inclined to have contacts with many faculty members of an apparently less intimate and friendly nature, quite understandably, since changes in occupational choices if also accompanied by changes in majors meant new advisers and contacts with other faculty members. In fact, the life of the Changer on campus seems to have been one of relatively more gregarious contacts with student and faculty both academically and socially. Their somewhat greater participation in social-fraternal groups would have had the net effect of exposing them to more people with diverse ideas, some no doubt quite different from those to which they had become accustomed.

Non-changers were more likely to have had the same adviser throughout the college career and actually to have less need for one than either Changers or

Deciders. Having already made up their minds about an occupation and perhaps also a major in college, they surely became selectively involved with people and organizations which had the net effect of confirming the decisions already made. Their greater involvement in academic organized activities on the campus is an example in point.

In the final analysis the different associational patterns of the three groups seemed to offer partial explanations for the manner in which they arrived at occupational decisions and perhaps vice versa.

Work experiences of the three groups of students also showed a logical congruency with choices made and their timing. Changers tended to hold non-university jobs not related to their major fields of study. This kind of employment was essentially an extrinsic reward experience and thus one that tended to demonstrate extrinsic reward values, i.e., money, etc., and thus the need for being able to retain the job in order to be paid. Such an occupational experience would seem to offer little in the nature of building a knowledge base for occupational choices of the type that college graduates would be expected to make. But it was the type of experience that might be expected to enhance the extrinsic reward views of an occupation in which Changers showed increasing interest over the four year period.

Deciders on the other hand more often had jobs in the university. Even though over one-fourth were not related to the majors, the work atmosphere was more conducive to internalizing intrinsic rather than extrinsic rewards of an occupation. Finally Non-changers more frequently than others had a job related to their major field of work and thus again were more likely placed in association with people of like thought and feeling about their own occupational ideals as well as with many other things.

Although occupational Changers more often reported not doing well in the old field as a reason for changing majors they on the whole were superior students; 82.1 percent had cumulative grade point averages of 2.0 or over. Although academic achievement in original choice area was undoubtedly a factor in the changes made, ability to do college work was not the major reason for changing in most cases. Deciders showed more variation in academic achievement than the others. Approximately one-fourth had grade point averages of less than 2.0 and more had a grade point average of 3.0 or over. Non-changers perhaps the most persistent academic achievers, tended to receive reinforcement in their original choice of a major. In general, continued high achievement in a chosen area tended to be associated with retention of the choice while achieving less well was associated with choice changes and late decisions. Perhaps the relationship of academic achievement to occupational choice was more a matter of limitation than determination.

CONCLUSIONS

In conclusion it may be said that:

1. Country and town-city youth came to the university with different degrees of occupational maturation, values and backgrounds, participated differently in the college experience, and with different results.
   a. Country youth:
      (1) Being somewhat more reliant in economic support were nevertheless in more need of financial assistance on the campus.
      (2) Being somewhat more committed to the academic demands of both high school and college they continued differentially to participate more in academic activities where choice was permitted.
      (3) Were more inclined to establish friendly relations with the faculty and advisers while on the campus.
      (4) Were more likely to remain in the university once enrolled.
      (5) Had much stronger materalistic-doer views about an occupation which, although reduced by the college experience, were nevertheless much stronger in the final analysis than for the town-city boys.
   b. Town-city youth:
      (1) Came to the university with a somewhat stronger general occupational commitment and much more specifically formulated views about choices of an occupation and majors.
      (2) Came with better prospects for financial support from home.
2. Those who left the university without a college degree were on the whole initially much poorer prospects academically for success in college than those who stayed, and subsequently had lower grade point averages for their semesters here.
3. Those who stayed proceeded through college at a very uneven rate and with much uncertainty as to future plans, some progressing rapidly to graduation and some delaying graduation to some anticipated date quite beyond the normal four year period.
4. The college experience had different effects on students in different states of occupational choice. For:
   a. Non-changers the effects seemed to be mostly reinforcement;
   b. Deciders mostly maturation; being uncommitted occupationally, they were more subject to being influenced by the college experience, and for
   c. Changers - changes also in deep seated values and views perhaps growing out of the latent influences of broader associations.
5. Occupational choices were made more on the basis of knowledge and interests than on influence of peers, teachers, advisers, and other university personnel.

   The influence of these latter factors was likely in shaping interests and internalized views of an occupation that served as intervening variables in arriving at occupational decisions.

6. Occupational interests were generally more aligned with occupational choices at the end of college than at the beginning for all students except Non-changers.
   This suggests that early firm occupational commitments may cause students to retain choices after the interest base has materially diminished and thus to exclude exposures and experiences that might otherwise be beneficial.

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